



JOHN AITKEN, M. D.





JOHN AITKEN, M. D.

*Vol 7 H. B.*

PRINCIPLES  
OF  
MIDWIFERY,  
OR  
PUERPERAL MEDICINE.  
BY  
JOHN AITKEN, M. D.

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ROYAL MEDICAL SOCIETY, A SURGEON OF THE ROYAL INFIRMARY,  
&c. AND LECTURER ON ANATOMY, SURGERY, AND MIDWIFERY, IN EDINBURGH.

THE SECOND EDITION,  
ENLARGED AND ILLUSTRATED WITH ENGRAVINGS.

---

To me be Nature's volume broad displayed,  
And to peruse her all-instructive page  
My sole delight.

THOMSON.

---

EDINBURGH:

Sold at the *Edinburgh Lying-in Hospital*, for the Benefit of  
that Charity.

MDCCLXXXV.



Professor Stern

at

Hesper Chapel

with respectful regards

Yours

The Author

## THE AUTHOR TO HIS PUPILS.

GENTLEMEN,

**I** Am happy that I have the honour so soon\* to present to you these PRINCIPLES of MIDWIFERY in a second and enlarged edition.

This work exhibits, in comparatively a small compass, a more extensive and elementary view of our art than is to be found in any similar publication in this country that I know of.

I doubt not that you will join with me in opinion, that the engravings are highly useful for illustration: Such of them as are not originals, are taken from the greatest masters; ALBINUS, HALLER, SUE, BAUDELOCQUE, &c.

I despair not to render the whole performance more worthy of your notice, in consequence of increasing experience, of more mature reflection, and, above all, of your friendly communications, which to me shall ever be most acceptable.

In Midwifery, as well as in every part of Medicine, I have invariably aimed at *improvement*; the particular attempts I leave to your recollection.

\* The first was published in April 1784.



tion \*; how far they have been successful, you must determine.

I deem no circumstance in my life more flattering and honourable than your unexampled patronage, whether I consider *number* or *eminence in science*.

Not to be ambitious to retain and enhance your friendly sentiments, would be a conduct mean and unworthy in the last degree.

Be assured, the possession of your favour is to me a darling object, which I shall unrelentingly pursue by every fair, liberal, and manly exertion, of which I am capable.

I have the high satisfaction thus publicly to mention, that the EDINBURGH LYING-IN HOSPITAL, which owes its establishment, and hitherto its existence to you, is prosperous beyond my most sanguine hopes, and promises to be an extensive and permanent asylum to many unfortunate and destitute individuals, in circumstances claiming the most tender attention†; and a useful seminary of obstetrical knowledge: From which society must derive the most happy fruits.

\* List of Inventions and Improvements.

† About two hundred women have been delivered, and all dismissed in health, since the opening of this hospital, about two years ago.

[ v ]

Your good sense has always been eminently conspicuous in the decorum and humanity of your conduct as PUPILS of this Hospital, for which no Encomium is too great.

It would be acting directly in contradiction to my feelings, and to gratitude, should I not cheerfully embrace this occasion most sincerely to thank you, " O ET PRÆSIDIUM ET DULCE " DECUS MEUM !" for your splendid and distinguished attention ; the deep impresson it has made, the hand of death can alone erase from the heart of,

GENTLEMEN,

Your most devoted and faithful  
friend and servant,

JOHN AITKEN.

EDINBURGH ANATOMICAL THEATRE, }  
*February 3, 1785.*

I am glad to hear that you are  
convinced in the doctrine and  
you are as firm as a rock for  
which is the foundation of our faith

I would be very glad to see you  
in the future and to study with you  
about the future of our country  
to think of it as a great power  
in the world for you are a man  
of great energy and the only man  
who has the heart and the head to  
lead the people of this country

Your most devoted and faithful

Friend and Servant

JOHN A. BAKER



**HIS PUPILS TO THE AUTHOR,**

**Viro eruditissimo ingeniosissimoque**

**JOANNI AITKEN, M. D.**

**Colleg. Reg. Chirurg. Socio, Chirurgo in Nosocom. Regal. Edinens; Anatom. Chirurg. et Artis Obstetricæ Prelectori, &c. &c.**

**PRÆCEPTOR SPECTATE,**

**N**OS, artis obstetricæ alumni tui, nomina quorum huic chartulæ subsignata sunt, hancce opportunitatem, nostras gratias sincere tibi proferendi, non carpere non possumus.

Durantibus prælectionibus tuis, nostris votis tam bene respondisti, ut hocce parvum pignus, observantiæ nostræ, erga te haud parvæ, proponere, nos et decet et delectat.

Etinem non dubitare possumus, quin, tuis præceptis memoratis, et rite in praxi applicatis; artem obstetricam, multo cum honore nobismet-ipsis, atque commodo puerperis infantibusque,



nostra sub cura degentibus, feliciter prosequamur.

Ubicunque terrarem, five sub Polis, five rectis Phœbi radiis, Fortuna nos collocaverit, omnes opportunitates, tuæ famæ diffundendæ, alacriter arripiemus.

Diu vivas et floreas, et quicquid incrementum existimationis atque felicitatis unusquisque annus revolvens tibi efferat \*.

*Datum Edinburgi 12. Kal. Maii, 1784.*

\* This letter is subscribed by forty-six gentlemen, part of the spring audience 1784, and was entirely unsolicited.

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P R I N C I P L E S  
O F  
M I D W I F E R Y.

---

INTRODUCTION.

**T**HE principle object of *Puerperal Medicine*, or *Midwifery*, is duly to promote and facilitate *Parturition* or *Birth*; or to afford requisite assistance during the *Puerperal State*.

A just and rational exercise of this art can only be founded in a very accurate knowledge of the *Structure*, *Functions*, and *Diseases* of the parts of the mother and child, as far at least as these are interested. Hence,

- 1 *Puerperal Anatomy.*
- 2 ———— *Physiology.*
- 3 ———— *Pathology.*



---

PRINCIPLES

MIDWINTER.

---

INTRODUCTION.

THE principle object of Perinatal Medicine, or Midwifery, is duly to promote and to ensure Parturition or Birth; or to attend to the assistance during the Parturient State. A just and rational exercise of this art can only be founded in a very accurate knowledge of the Structure, Function, and Action of the parts of the mother and child, as far as least as these are interested. Hence,

1. Perinatal Anatomy.
2. Perinatal Physiology.
3. Perinatal Pathology.

# I. PUERPERAL ANATOMY.

**P**UERPERAL ANATOMY respects,

- |                       |          |
|-----------------------|----------|
| 1. <i>The Osseous</i> | } Parts. |
| 2. <i>The Soft</i>    |          |

THE osseous parts, are those pieces of bone which complete the inferior part of the trunk of the skeleton, called *bones of the pelvis*, or *basin*, because they include the cavity so named.

The soft parts are the *genital* or *uterine* system, and such organs as become interested in parturition from proximity, or otherwise.

## THE BONES OF THE PELVIS.

The pelvis is the bottom portion of the abdomen, or lower belly; consequently, a cavity below, and somewhat before the spine or back-bone, and above the inferior extremities.

The bones of the pelvis, connected together, make an irregular ring, consisting in the adult of four pieces:

1. *Os Sacrum*, sacred bone.\*
2. *Os Coccygis*, rump bone.
- 3 and 4 *Ossa Innominata*, nameless bones.

\* See Plate I. and II.

The os sacrum and os coccygis, placed one above the other, form the back part; the ossa innominata inclose the sides and fore part of the pelvis.

### OS SACRUM.

*Os sacrum*, viewed from before or behind, is triangular; the most acute angle is lowest, blunted, and articular, to admit of connection with the os coccygis. The middle of the side opposite to this angle is the highest point, it is joined to the spine or chain of bones named the vertebrae; it projects considerably into the pelvis; on this account it is named *promontory* \*. The other sides are partly articular, for connection with the ossa innominata. The anterior surface, in which are ordinarily five pairs of holes, being considerably hollowed, is termed *concavity*. These holes communicate with a large triangular canal, which runs from behind the articular surface, on the upper side, nearly through its whole length. The like number of smaller ones on the posterior convex, and rough surface, also open into this canal.

### OS COCCYGIS.

*Os coccygis* is a miniature representation of the os sacrum, the holes, canal, articular surfaces on the sides, and inferior angle excepted. The side opposite to this angle is articular, for connection with the os sacrum, by which, the

\* PEBNAC's Elém. Art. Obst. 12. monst. 1. 10. p. 126.

BAUDELOQUE's L'Art des Accouchemens, tom. I p. 222. He calls it *La saillie du sacrum*.



concavity of that bone is seemingly augmented.

The general anatomist describes both these bones as making up the inferior pyramid of the spine, under the denomination of *false vertebrae*, alluding to the pieces of which they are composed in the young subject \*, and to their concretion, compared with those of the superior pyramid called *true vertebrae*.

### OSSA INNOMINATA.

Each *os innominatum*, during early life, plainly consists of three pieces, which, before puberty, suffer complete concretion, or become one.

- 1 *Os ilium*, haunch-bone,
- 2 *Os ischii*, hip-bone, seat-bone,
- 3 *Os pubis*, share-bone.

*Os ilium* makes the uppermost or largest share of the *os innominatum*; its circular edge, which forms the contour of the haunch, is called *crest* and *spine*; the anterior extremity of this spine, and a protuberance about an inch and half below it, are *superior* and *inferior spinous processes*: A prominent line, stretching from the upper side of the *os sacrum*, to the contiguous *os pubis*, is *linea innominata* †: This makes part of the *brim*, or superior boundary of the pelvis: The hollow between this bone and the crest, which of course is no part of the pelvis, is *fossa iliaca* ‡: Its articular surface is calculated to join with the *os sa-*

\* WIN SHAW'S Exposition Anatomique.

† PLENC'S Elem. Art. Obst.

‡ BAUDELOQUE'S L'Art des Accouchemens.

trum: And a semicircular hollow or notch, on the hind edge, is formed into a large hole by a ligament named *sacro-ischiatic*.

*Os ischii* is the undermost portion of the *os innominatum*; its inferior part, on which the body is supported when sitting, is *tuberosity*, (*tuber ischii*); on the back part, about two inches above the lowest point of the tuberosity, is a sharp process, named *spine*, (*spina ischii*); it inclines to the adjacent edge of the *os sacrum*, and is nearer to its fellow than the *one tuberosity* is to the other. A process, named *ramus*, stands obliquely forwards from the tuberosity, about an inch and a half in length, it unites with a similar one of the *os pubis*, the curvature or notch formed by their union, makes about half of the circumference of a large oval-like hole, called *thyroid* (*foramen thyroideum vel ovulare*), which is turned somewhat forwards and downwards.

*Os pubis* is the foremost division of the *os innominatum*, on the edge of its cavity, which respects its fellow, is an articular surface, to favour their cohesion. The superior edge is turned a little outwards like a lip, and is its *crest*. A strong process connects this bone to the *os ilium*; the continuation of the *linea innominata* is to be seen in its upper part; it is consequently a portion of the brim of the pelvis. A slender and shorter process, named *ramus*, is directed downwards and backwards to join with that of the *os ischii*; these complete the thyroid hole. This *ramus*, with its fellow, form a curvature termed *angle* and *arch* of the *ossa pubes*. The *urethra*, or passage of the urine, is lodged in its upper part,

\* PLENCK's Elem. Art. Mid.

## PUERPERAL ANATOMY. 29

while the bladder is well supported on the conjoined smooth interior surfaces of the bodies of these bones, turned obliquely upwards.

The place of union of these three pieces of the *os innominatum*, on the exterior surface, is distinguished by a cup-like cavity, called *acetabulum*, which receives the head of the thigh-bone.

### CONNECTION OF THE BONES OF THE PELVIS.

The *ossa innominata* are connected immovably, by their posterior ends, to the *os sacrum*, by means of a cartilaginous or gristly substance, of a considerable thickness.

This mode of articulation, or joining of bones, by anatomists, is called *symphysis* or *synchondrosis*.

The junction of the *ossa innominata* and *os sacrum* is termed *sacro-iliac*, or *posterior symphysis* of the pelvis; and that of these bones to one another is called *anterior symphysis* of the pelvis, or *symphysis pubis*, in which a particular disposition of the connecting matter has been described\*.

No relative motion is permitted among these bones in the healthful state, notwithstanding contrary assertions of some authors†.

The connection of the *os coccygis* and *sacrum* appears likewise to be a *symphysis*, but so lax as to permit occasionally a degree of forward and backward motion of its inferior extremity or point; by this the concavity of the pelvis behind is proportionally varied, and consequently its inferior aperture.

\* London Med. Obs. and Inquiries, vol. ii. p. 333.

† DUVERNEY'S ANATOMY. CAMPER'S DEMONSTRAT. ANAT. PATHOL.



## PUERPERAL ANATOMY.

### LIGAMENTS OF THE PELVIS.

Animal ligaments in general are perhaps productions of the *periosteum*, a dense membrane, which covers the bones.

A ligament on each side, named *sacro-iliac* and *lateral*\*, is extended from the upper side of the os sacrum to the adjacent edges of the spine of the *os ilia*.

Below, from each side of the os sacrum, two ligaments are extended to the os ischii, therefore named *sacro-ischiatric*, the *anterior* is attached to the *spina ischii*; the *posterior*, the largest and strongest, is inserted into the *tuber ischii*.

These ligaments, thus disposed, leave an opening between their anterior extremities, which becomes a hole by the assistance of the os ischii, and transmits the tendon of the *obturator internus* muscle, on its way to the thigh-bone; at same time they form the posterior great notch of the os ilium into a hole for the transmission of blood-vessels and nerves to the leg.

Each thyroid hole is nearly closed by a ligament, on this account named *obturator*.

Ligamentous fibres are variously stretched across the symphysis pubis, so as to strengthen this connection.

A portion of a tendon of the external oblique muscle of the abdomen, improperly called *Pau-part's* or *Fallopian's ligament*, is extended on each side, between the superior spinous process of the os ilium and crest of the os pubis, by which and the adjacent bone, a large space is inclosed. Through this vessels and nerves are transmitted

\* SIMMONS' Anatomy of the Human Body.

to and from the leg, and that kind of *hernia* or *rupture*, called *femoral*, chiefly incidental to women, is formed.

### FORM OF THE PELVIS.

A precise acquaintance with the *form* of the pelvis is interesting in every view; because, in a great degree, on the relation betwixt this and that of the child, depends successful parturition.

The pelvis may be considered as a great passage or hole inclosed principally by the irregular zone or circle of bones already described; its form is altogether *peculiar*, being various in various parts.

The line bounding its superior aperture is its *brim*, that circumscribing its inferior one, is its *bottom*.

The *brim* is formed by the upper side, or edge of the os sacrum, *linea innominata*, and ridges of the ossa pubis, already adverted to.

The margin of its *bottom* irregularly waved and serpentine, is formed by the *rami* or arch of the *ossa pubis*, the *ossa ischiorum*, the *sacro-ischiatic ligaments*, and *os coccygis*.

The *brim* does not much resemble any regular figure; it approaches somewhat to an *oval* placed transversely between the ossa ilia. This circumstance is chiefly the effect of the projection of the promontory of the os sacrum; it otherwise inclines a great deal to a circle.

The *middle portion*, or that which is immediately within the *brim* is nearly *circular*.

The *inferior aperture*, considered as bounded by the opposite points of the bones that ap-

proach the most to one another, namely, the *ac coccygis*, and *symphysis pubis*, and *spina ischiorum*, is almost circular.

The tuberosities, and a considerable share of the *ossa ischiorum*, in this view of the bottom of the pelvis, are really under it.

### THE AXES OF THE PELVIS.

Attention to the *axes* of the pelvis is consequential in theory as well as in practice.

It may be considered as having *two axes*, one in the superior, and one in the inferior aperture.\*

A line equidistant from the opposite points of the brim is the axis of the superior aperture: This makes an acute angle of about twenty-three degrees with the axis of the body; protracted upwards, it pervades the umbilicus, or navel, and during advanced pregnancy, the point of transmission is considerably higher.

The axis of the inferior aperture is likewise a line equidistant from the bounding points already described; protracted downwards, it passes through the anus, or a little before it.

These two axes extended backwards, cut one another in, or a little beyond the *os sacrum*; if joined by a curved line equidistant from the sides of the pelvis in which it is placed, they mark what may be called the *path* of the child's head, or the line in which its central point is moved during parturition.

When the body is reclined to a middle degree between the sitting and lying attitudes, the brim

\* BAUDELOQUE's *L'Art des Accouchement*, tom. 15. p. 3.



of the pelvis becomes nearly horizontal, and the superior axis perpendicular.

The hand, or chirurgical instruments, ought to coincide with these axes; the superior one is nearly that of the uterus, or the line in which it rises during the gravid state.

### THE DIMENSIONS OF THE PELVIS.

It is by no means sufficient, to a just and scientific practice of midwifery, to acquire a general notion of the form of the pelvis; its dimensions ought to be precisely ascertained; for this purpose, its diameters must be considered.

A line stretching from the promontory of the os sacrum to the symphysis pubis, so as to divide the brim into halves, is the *short, direct, or conjugate* diameter, (*diameter recta vel conjugata*).

A line cutting the short diameter at right angles, and dividing the brim into halves, is the *long or transverse* diameter, (*diameter transversalis*).

A line stretching from nearly the posterior symphysis of the one side, to the junction of the os ilium, and pubis, of the other, is its *oblique diameter*, (*diameter obliqua*); sometimes stiled its *diagonal*\*.

The diameters of the inferior aperture obtain the like appellations.

The depth, various in various points of the pelvis, is greatest at the hind, and least at the fore part.

\* PLENCK's Elem. Art. Obst.

Authors differ considerably anent the quantities or dimensions of these diameters.

Dr SMELLIE, who has been generally copied by the writers in this country, gives out the following.

*Brim.*

Long diameter,	- - -	5½ inches.
Short,	- - -	4½ -----

*Bottom.*

Coccyx from symph. pubis, distant	5 inches.
Tuber ischii from tuber ischii, distant	4½ -----

*Depth.*

At the back part	-	5 inches or more.
At the side	- - -	4 -----
At the fore part	- - -	2 -----

Dr STEIN ascribes to the pelvis these dimensions, calculated to the *Parisian* scale\*.

*Brim.*

Conjugate diameter,	- - -	4 inches.
Transverse,	- - -	5 -----
Oblique,	- - -	4½ -----

\* PLENCK's Elem. Art. Obst. p. 14.

*Bottom.*

The Conjugate diameter, when the inferior extremity of the os coccygis is nearly an inch pushed backwards, amounts to 5 inches.

M. BAUDELOCQUE gives to the 'pelvis the following dimensions \* :

*Brim.*

Short or small diameter, - 4 inches.  
Long or great, - 5 ———

*Bottom.*

Conjugate diameter, - 4 inches.  
Transverse - 4 ———

This last is sometimes a little more.

*Depth.*

Behind - 5 inches.  
Sides - 3½ ———  
Fore part - 18 lines.

*Angle or Arch.*

At the symphysis, 15 to 20 lines; its limbs distant from each other somewhat more than 3 inches; its height is about 2 inches.

† L'Art des Accouchemens, vol. I.



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The mean dimensions of four pelves, which I accurately ascertained, were:

	<i>Brim.</i>	
	<i>Inches</i>	<i>Eighths</i>
Long diameter	5	3
Short -----	4	6

	<i>Bottom.</i>	
Conjugate diameter,	3	6
Transverse -----	4	1

----- *Angle or Arch.*

Tuber from tuber, fore part, distance, 3 4

	<i>Depth.</i>	
Behind	4	1
Sides	3	3
Fore part	1	4

The *external dimensions* of the pelyis covered by the soft parts, according to BAUDELOCQUE, are,  
1. From the upper point of the os sacrum, to the lowest end of the os coccygis, the distance is between four and five inches.

2. Between the spinous process of the last lumbar vertebra; and an opposite point before the symphysis pubis, the distance is from seven to eight inches, the female supposed to be moderately corpulent.

3. The distance betwixt the anterior superior spinous processes of the ossa ilia, is between eight and nine inches.

A proper plan, upon which to conduct the mensuration of the living pelvis, as well externally as internally, is a matter of the highest consequence.

## THE GENITAL SYSTEM.

The Genital System consists of

- 1 Ovaria,
- 2 Uterus,
- 3 Tubæ Fallopianæ,
- 4 Vagina Uteri,
- 5 Os Externum.

### THE OVARIA.

The two ovaria are situated one on each side, near the brim of the pelvis, and extremities of the long diameter.

These organs a good deal resemble testicles in their form and other circumstances; and accordingly were denominated *Testes* very generally by the Ancients \*.

The ovaria are tied each by a short ligament to the angles of the uterus, which is consequently situated between them. They are covered by the *peritoneum*, or lining membrane of the belly.

This covering is *smooth* and *unbroken* in the young subject; but, in the adult, it often exhi-

† CASSERI Tab. Anat. xix. NN. XX. VV. The word Ovarium is not employed by this author.

bits rents, or *scar-like marks*, corresponding to dusky substances within; these substances are named *corpora lutea* †.

*Vesicles*, consisting of a pulpy membrane, about fifteen in number, filled with a coagulable lymph, are discoverable among the cellular and vascular substance composing the ovaria: After the lymph is discharged, these become *corpora lutea* ‡.

Their blood-vessels, named *spermatic*, are similar in origin, course, and form, to those so named in the male.

### THE UTERUS.

The Uterus, or Womb, resembles a flattened ovoid, and is situated more or less in the superior axis of the pelvis.

This organ is considered as made up of

- 1 *Fundus*, bottom.
- 2 *Corpus*, body.
- 3 *Cervix*, neck.

The fundus is uppermost. The flattened sides of its body are turned to the os sacrum and os pubis respectively; its edges coincide with the transverse diameter of the pelvis.

† HALLERI Prim. Lin. Physiol. sect. DCCCLXXVIII.

‡ ————— sect. DCCCLXVI. In ovario etiam teneræ virginis sedent *bulle* rotundæ, membrana pulpofa, firmula factæ cellulosis fibris, undique ad ovaria adnexæ, quæ *coagulabili lymphâ* replentur, incerto numero, ad quindecim in uno ovario et ultra, &c.



The cervix, about an inch, or inch and half in length, is terminated by *two processes*, one before and one behind, separated by a transverse *rima* or *chink*; on this account it is named *os tincae*, and also *os internum uteri* (internal orifice of the womb).

The uterus is hollow. From the middle of the rima, a contracted passage leads to a small triangular cavity, very limited in its extent from the fore to the back part. The passage of the cervix joins the inferior angle of this cavity. Its side opposite to this angle corresponds to the fundus. Each of the lateral angles is perforated by a *fallopian tube*; on this account they may be named *uterine tubes*.

A share of the fore part of the body, the whole of the bottom, and hind part of the uterus, are covered by the *peritonæum*. The anterior portion of its body and neck, not thus invested by this membrane, are in immediate contact with the bladder of urine; a circumstance deserving to be well remembered in the detection and management of several diseases.

The substance of the uterus is of considerable and pretty equable thickness. It consists of

1. Fibres, seemingly of the membranous kind, interwoven with the numerous blood-vessels, and with one another, in various directions; all or part of them some have supposed to be *muscular*:

2. A lining membrane, more or less smooth, continuous with that which is reflected through, and covers the *os internum*; it is seemingly continued along the cavities of the uterine tubes.

The uterus is connected loosely to the constituent parts of the pelvis and adjacent surfaces, by *cellular substance* and *ligaments*.

The duplicature of the peritonæum, extending

from the edges of the organ in question to the sides of the pelvis, nearly in the course of its transverse diameter, are *ligamenta lata*, or *broad ligaments*.

From the anterior points of the angles of its bottom, two cord-like substances proceed, one on each side, along the brim of the pelvis, to the rings of the corresponding abdominal muscles, through which their extremities somewhat emerge. These are the *ligamenta rotunda*, or *round ligaments*. They are in a considerable degree valvular \*; and seem to regulate its position during the gravid state †.

#### FALLOPIAN TUBES.

The *Fallopian* or *Uterine Tubes* go off from the lateral angles of the cavity of the uterus, transversely, in a waving manner, each covered or invested by a fold of the corresponding broad ligament. Their trumpet-like or expanded terminations are turned somewhat back towards the ovaria respectively, near the brim of the pelvis.

These terminations are surrounded with a fringe-like border, resembling foliage ‡. This by some is absurdly called *Morsus Diaboli*.

The cavity of the tubes, at their terminations is equal to that of the wing-feathers of the smaller birds. It gradually diminishes towards the uterine extremity, which penetrates the substance and opens into the cavity of the uterus by a winding course.

\* DIONIS Chirurgie.

† WINSLOW's Exposition Anatomique.

‡ HALLERI Fasciculi.

These tubes are situated in the broad ligaments between the ovaria and ligamenta rotunda.

I found them in *concretion* with the ovaria.

In another case the outer extremity of one was *impervious*.

### VAGINA UTERI.

The *Vagina, Passage of the Womb, or Birth*, is a tube five or six inches long, very capacious and distensible.

The upper extremity, continuous with the substance of the uterus, embraces the os internum in such a manner that this projects a little way into its cavity, and can be distinctly felt by the finger. Accordingly, ascertaining the state of it is a principal object of *touching*, or *exploratio obstetricia*, to be afterwards explained.

From the os internum, the vagina is continued forwards and downwards, its direction nearly coinciding with the inferior axis of the pelvis.

The inferior termination of this tube is termed *os uteri externum* (external orifice of the womb), and is situated between and almost equidistant from the arch of the ossa pubis and anus.

The vagina makes, with the uterus, a very obtuse angle; they form a curvature nearly coinciding with the conjoined axes of the pelvis \*: A circumstance which makes its posterior side a little longer than the anterior one.

The vagina consists of

1. A dense exterior membrane, evidently continuous with the *fibrous texture of the uterus* at its upper part, and the *cutis vera*, or *true skin*, at

\* WINSLOW'S Exposition Anatomique.



the inferior end ; it is much less vascular than the former :

2. A lining membrane, continued from *that of the uterine cavity* to the *cuticula* or *scarf-skin*.

Thus it would appear, that the vagina and uterus are *productions*, or *internal processes* of the common integuments, under special modification. The inflection at the os extremum is obvious.

The interior surface of the vagina, during the virgin state, abounds with rugæ, or wrinkles, which are much altered or obliterated by child-bearing †.

Many glands, of the mucous kind chiefly, are scattered along the cavity of the vagina, cervix uteri, in the latter situation, named *vesiculæ nabothi*\* ; separating the necessary defending and lubricating fluids.

The connection of this organ with the adjoining parts deserves to be fully marked.

Anteriorly, it is in contact with the *neck of the bladder*, and the *urethra* through its whole length ; and posteriorly, with the *intestinum rectum*.

#### OS EXTERNUM.

The *os externum uteri*, or external orifice of the womb, strictly speaking, is the inferior or external opening of the vagina ; but the expression is generally regarded as equivalent to *pudenda*, *vulva*, *sinus muliebris*.

† HALLER's Fasciculi. This great and ingenious man has paid much attention to this rugose condition.

\* PARENCK's Elem. Art. Obst.

The os externum beginning from the *prominence* of the integuments, placed upon the ossa pubis, called *mons veneris*, is continued towards the os coccygis, and is terminated about two inches before the extremity of this bone.

Two prominent folds of the integuments, named *labia magna*, constitute the sides or lateral boundary of the os externum: They extend from the mons veneris, gradually diminishing in prominence and size, to their terminations at the posterior part of the margin of the opening of the vagina. These, and the mons veneris, begin to abound with hair at puberty.

Between the beginnings of the labia magna is apparent the point of the *clitoris*, covered more or less by a semicircular fold of the integuments, called *præputium* (fore skin); because it somewhat resembles the penis, and, like it, is attached by its crura to the rami of the ossa pubis.

Extending from the clitoris backwards, are two smaller doublings of the integuments, of various length and projection, situated within, and generally covered by the labia magna, called therefore *labia minora*, or *nymphæ*; they terminate at the anterior part of the margin of the vagina, and are very vascular.

Between the posterior extremities of the nymphæ, and immediately before the vagina, is placed the orifice of the urethra or passage of the urine, a tube somewhat more than an inch in length, and equalling a swan's quill in capacity.

Behind the urethra, and in contact with it, is the *orifice of the vagina*, or, in a strict sense, the *os externum*.

This opening is narrowed, generally, till the *sexual commerce* has taken place, by the *hymen*, a membranous border, or doubling of the integuments, of a semilunar or circular form †; its fragments are *caruncula myrtiformes*.

The whole of the surface within the labia magna is exquisitely sensible; like the skin of lips, exceedingly vascular, and copiously stored with mucous and other glands, furnishing fluids for protection; they are often the seat of disease.

The interstice betwixt the os externum and anus, about an inch in length, is called the *perinæum*; a space subjected to great changes, particularly distention, during parturition.

A cavity between the orifice of the vagina and perinæum is *fossa navicularis*, bounded laterally and behind by the *fourchette* †.

The inferior extremity of the vagina is connected to the bottom of the pelvis, partly by a muscle, called *levator ani*; and to the anus and os coccygis, by another, named *sphincter ani*: A continuation of this last on each side of it, is *constrictor cunni*.

The organs intermediately interested in parturition, from proximity or function, are,

- 1 *Vesica Urinaria.*
- 2 *Intestinum rectum.*
- 3 *Mammæ.*

#### VESCIA URINARIA.

The *vesica urinaria*, or *bladder of urine*, is an oval bag or cyst, placed between the uterus and

† HALLER's Fasciculi.

‡ SMELLIE's Midwifery.



ossa pubis, and resting upon the smooth inclined surface of these bones.

The bladder, like the uterus, is considered as consisting of,

- 1 Fundus.
- 2 Corpus.
- 3 Cervix.

The fundus or bottom is uppermost.

The corpus or body touches the cervix uteri with its hind surface, and ossa pubis with its fore one.

The cervix or neck is the contraction betwixt the body and urethra, corresponding behind to the upper part of the vagina; and before to the arch of the ossa pubis; so that the urethra adheres immediately to this arch.

The peritonæum, reflected backwards from the abdominal muscles, about an inch above the ossa pubis, covers a share of the anterior surface of the body, all the bottom, and almost the whole of the posterior surface of the bladder, and then mounts upon the uterus.

The bladder is attached to the ossa pubis, and adjacent organs, chiefly by cellular substance.

Proximity must create a mutual affection of this organ and the uterus from distension, disease, &c.

#### INTESTINUM RECTUM.

The *intestinum rectum*, or *straight gut*, is the inferior extremity of the intestine, shut by the *anus* like a valve.

This organ extends from the promontory of the os sacrum, along the concavity of this bone and os coccygis, to which it is fixed by cellular substance, so that the anus is situated about an inch before the extremity of the last named bone.

The relation of the rectum and vagina has been already described; from the vagina upwards it lies behind the peritonæum, so that a perforation may be made safely from the vagina into the peritonæal cavity, for the removal of ascites or peritonæal dropsy\*.

The rectum is of great capacity, and, when distended, it necessarily tends to the axis of the pelvis, and affects the state and situation of the uterus and vagina, and in its turn is affected by them.

#### MAMMÆ.

The *mammæ*, or *breasts*, are collections of milk-glands, more or less pyramidal and prominent from the fore part of the chest.

The numerous mammary glands are connected by vessels and cellular substance; this last forms a kind of investment or cyst about them, loosely attached to the contiguous muscle, by which means a degree of gliding is permitted: It adheres more closely to the integuments, particularly the *areola* or disk about the *nipple* (papilla).

The nipples are bundles of the trunks of the excreting ducts of the milk-glands; each contains about twenty, and carries in its top the like number of corresponding orifices. The cellular mat-

\* London Communications, No. xii.

ter binding them together is peculiarly elastic, and by corrugating them, performs, in some degree, the function of a valve, preventing somewhat the escape of the milk.

The disk abounds obviously with sebaceous glands for protection.

The milk glands begin to be evolved about the thirteenth and fourteenth years in this climate, and give proportional size to the mamma.

The mammary arteries and epigastrics furnish blood to the breasts. Their absorbent vessels run towards the axillary glands.

These organs are by function interested in parturition and its consequences.

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The puerperal anatomy necessarily extends to

- 1 The gravid uterus,
- 2 The child.

### THE GRAVID UTERUS.

The uterus is *gravid* when it contains the *embryo*, *fetus*, or *child*, a state termed *gravidity*, *pregnancy*, and *utero-gestation*.

In proportion as the included child grows and acquires bulk, the uterus is distended in all its dimensions, still, however, preserving the oval form †.

The fundus, as pregnancy proceeds, gradually emerges from the brim of the pelvis, following nearly the direction of the axis.

† ALBINI Tabulæ.

ROEDERERI Tabulæ.

HUNTER'S Gravid Uterus.



By the fourth month it is a little above the ossa pubis \*, and at last mounts considerably above the umbilicus, pushing upwards, and laterally the adjacent bowels.

The ligamenta rotunda, now put somewhat on the stretch, seem calculated to regulate in some measure the position of the fundus in this elevated condition †.

The ovaria are drawn a good deal from their usual residence within the pelvis.

The cervix is gradually raised and shortened, and its cavity proportionally widened, at last the prominences bounding the os internum are totally obliterated.

During this distension, the thickness of the uterus is not much diminished, its substance becomes lax and spongy, and its numerous blood-vessels are proportionally enlarged; a change somewhat resembling that which the common integuments undergo when gradually distended by any subjacent tumour.

The flesh-like, or muscular appearance which the gravid uterus at last exhibits, has induced some authors to consider it as a muscular organ ‡, an idea by no means to be readily credited, because it is repugnant to

1 Appearance in the unimpregnated state,

2 Function,

3 Analogy.

In some instances the uterine parts have been double.

\* PIENCK'S Elem. Art. Obst. p. 41.

† DIONIS' Chirurgie,

‡ DR HUNTER'S Gravid Uterus.

## THE CHILD.

The child, while unborn, and for some time after birth, has the following specialities of state and structure deserving attentive consideration.

- 1 Umbilical chord,
- 2 Placenta,
- 3 Membranes,
- 4 Liquor amnii,
- 5 Urachus,
- 6 Foramen ovale,
- 7 Ductus arteriosus,
- 8 Canalis venosus,
- 9 Unexpanded lungs,
- 10 Membrana pupillaris,

## I. UMBILICAL CHORD.

The *umbilical chord* (*funis umbilicalis*) consists chiefly of

- 1 Two arteries,
- 2 One vein.

The arteries are direct productions or continuations of the *hypogastric* or *internal iliac* ones reflected, one on each side of the bladder. Running before the peritoneum, they gradually approach one another at the umbilicus (navel), which is really a *round opening*, or *ring*; they are in contact, and pass through it; they then proceed along the chord, which is about two feet

long, to its termination in the placenta, in which they are minutely and suddenly ramified.

The vein originates from the placenta at that part where the arteries enter it, and proceeds to the umbilicus spirally, like them. It passes through the ring, and is continued in an upward direction, before the peritoneum, to a cavity in the inferior surface of the liver, named *sinus portarum*, where it joins the trunk of the *vena portarum*. It is comparatively large.

These vessels are connected by cellular matter, and covered by the integuments hereafter described, from the umbilicus to the placenta.

#### PLACENTA.

The *Placenta*, or *Uterine Cake*, is a vascular mass, more or less circular, thickest in the middle, convex and articular in the surface turned to the uterus, slightly concave, or nearly plain, on the opposite surface.

It is chiefly formed by the ramifications of the umbilical arteries and veins, their branches appear beautifully serpentine and prominent on the surface corresponding to the chord.

The lobes, or subdivisions, correspond to the trunks of the vessels, by the branches of which they are formed. When freed by maceration, they have the appearance of fine fringes or brushes.

The placental vessels and their lobes are connected by cellular matter, which pretty completely covers, as with a lamina, the uterine surface of it.

By proper fluids injected, particularly quicksilver, the rout and motion of the blood can be imitated fully.



## MEMBRANES.

The *Membranes* which form the *cyst* in which the child is included resemble a distended bladder, accurately filling the uterine cavity, their exterior surface being applied to every part of it. They are

- 1 Chorion,
- 2 Amnios.

The *Chorion* is outermost; its exterior surface consequently in contact with the uterus. The adhesion, which is slender, is formed by a diffusion of cellular substance, which has been named *spongy chorion*\*, and even regarded as a distinct involucre, derived from the uterus, under the appellation of *membrana decidua*, and *membrana decidua reflexa*†.

The cellular connecting matter upon the chorion in the placenta and chord never contains any fat or oil. It is evidently continuous at the umbilicus with that of the rest of the body, in the same manner as the umbilical vessels are with the others.

The like continuity is to be remarked between the *amnios* and *cuticula* or *scarf-skin*, and the *chorion* and *cutis vera*, or *true skin*.

Thus it appears, that the placenta and umbilical vessels are a part of the vascular system, as are the membranes of the integuments. They are indeed *temporary* and *caducous*, analogous in this particular to some of the other parts, the *teeth*, the *hair*, &c.

\* HALLER's Elem. Physiolog.

† Dr HUNTER's Gravid Uterus, tab. xxviii.

The child in utero, thus considered, is a complete œconomy, and may justly be said to be *totus in se atque rotundus*.

The placenta and membranes together are frequently called *secundines* (*secundinæ*), and *after-birth* and *after-burthen* (*Parrière faix*).

These seem to be *rudimental* parts of every young animal. SPALLANZANI, that ingenious and acute naturalist, has seen them in form of a pellucid vesicle in eggs before fecundation and incubation \*. They seem to be as essential to animal growth, as the *root* is to that of vegetable.

The membranes, with the included child, have been considered by some as an *ovum* or egg †. The analogy either does not exist at all, or is not close.

The chorion and amnios, delicate and pellucid, in general are easily torn or destroyed. Their blood-vessels must be small. No nerves or absorbents have been discovered upon them, or in the placenta.

#### LIQUOR AMNII.

*Liquor Amnii*, commonly called *Waters*, is the collection of water-like or serous fluid, filling completely the cavity of the amnion not occupied by the child. It deserves attention as to

- 1 Sensible qualities,
- 2 Quantity,
- 3 Source,
- 4 Constituent parts,

\* Dissertations relative to natural history, vol. ii. p. 36. 359.

† SMELLIE'S Midwifery, *passim*.

- 5 Changes,  
6 Uses †.

### URACHUS.

The *Urachus* is a tube stretched directly from the fundus of the bladder, between the umbilical arteries, and becomes impervious before it reach the navel.

### FORAMEN OVALE.

*Foramen Ovale* is an oval communication, provided with a valve, between the auricles of the heart. An enquiry may be made concerning its

- 1 Duration,  
2 Uses.

### DUCTUS ARTERIOSUS.

*Ductus Arteriosus* is a short tube, forming a passage from the aorta to the pulmonary artery.

### CANALIS VENOSUS.

*Canalis Venosus* is a venous canal stretching between the sinus venæ portarum and vena cava.

### UNEXPANDED LUNGS.

The lungs are unexpanded, and comparatively heavy, so as to sink in water, before respiration takes place.

† PLENCK's Elem. Art. Obst.



Attention to this circumstance is of high importance in the *anatomia forensis*; or *judicial anatomy*, as it may be called.

#### MEMBRANA PUPILLARIS.

*Membrana Pupillaris* is a delicate film connected with the pupil of the eye \*.

#### FORM OF THE CHILD.

The child's body is of a pyramidal form; the head, being the part of greatest circumference, is the base of the pyramid; consequently the trunk and limbs may be readily transmitted through any opening by which the head has passed.

#### SITUATION OF THE CHILD IN UTERO.

The bulk of the child's head seems to be inversely as its age, and always bears a great proportion to the other parts.

This circumstance may be a chief cause of its being very constantly turned downwards, or presented to the os internum.

The abundance of the liquor amnii during early life, favours gravitation, and allows the head to take the aforesaid position, and permits the *twisting* or *entangling* of the chord about the neck or limbs, and what is more remarkable, the *knotting* of it.

\* DR GERARD of Liverpool, my ingenious friend, has lately published an inaugural dissertation, in which the above, and other circumstances of discrimination of the child, before and after birth, are accurately treated.

## STRUCTURE OF THE SKULL AT BIRTH.

The skull, during youth, is made up very constantly of eight pieces, viz.

*Os frontis* (frontal bone), corresponding to the fore-head ;

Two *ossa parietalia* (parietal bones), answering to the crown (vertex), and neighbouring surface ;

Two *ossa temporum* (temporal bones), placed one on each side or temple ;

*Os occipitis* (occipital bone), forming the hind-head and posterior part of the base ;

*Os ethmoides* (ethmoidal bone), situated in the fore-part of the base, above the nose ; and

*Os sphenoides* (sphenoidal bone), completing the middle portion of the base.

These pieces making up the skull, are connected by a mode of articulation called *suture* or seam (*sutura*), of which the various portions, seven in number, have obtained specific names, viz.

That which connects the frontal bone and anterior extremities of the parietal bones, is *coronal suture*, extending from temple to temple ;

That which fixes the posterior extremities of the parietal bones to the occipital one, is *lambdoidal suture*, stretched from the base behind the temporal bone on one side, to the corresponding point of the other, nearly coinciding in direction with the coronal suture, both inclining considerably backwards ;

That which runs between the contiguous edges of the parietal bones, from the coronal to the lambdoidal suture, is the *sagittal suture*.

Those which surround the temporal bones, one on each side, are *temporal futures*;

That which incloses the ethmoidal bone, is *ethmoidal future*; and

That which joins the sphenoidal bone to the contiguous bones, is *sphenoidal future*.

At birth, the ossification being incomplete, the futures are not formed: Their future situations, however, can be distinctly traced. In points corresponding nearly to the extremities of the sagittal future, are the remarkable deficiencies of bone, named *anterior and posterior openings of the head* (*bregmata, fontanellæ*).

#### FORM.

In every period of existence, the human skull, and consequently the head, enjoys more or less of the *ovoid* or *egg-like* form; of which the fore-head is the *small*, and the hind-head the *great* extremity: Of course, the *long axis* stretches from the fore-head to the hind-head; and the *short one*, cutting this at right angles, extends from ear to ear.

#### DIMENSIONS.

The *dimensions* at birth are considerably various: The *mean measurement* of its axes, according to PLENCK, on the *Parisian* scale, is,

Long axis,	- - -	4 inches.
Short -----	- - -	3 $\frac{1}{4}$ ----- *

Two skulls, which I accurately measured, were found to possess the following:

\* Elm. cArt. Obs. p. 14



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		<i>Inches.</i>	<i>Eighths.</i>
	<i>First.</i>		
Long axis,	-	4	7
Short -----	-	3	6
	<i>Second.</i>		
Long axis,	-	4	4
Short -----	-	3	2
	<i>Mean Dimensions.</i>		
Long axis,	-	4	5
Short -----	-	3	4†

### SIZE AND WEIGHT OF THE NEW-BORN CHILD.

At birth the child's

- 1 Length is eighteen or nineteen inches.
- 2 Breadth at the shoulders five inches and a quarter.
- 3 Weight is six or seven pounds\*.

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Connected with the puerperal anatomy are the following important operations.

- 1 Catheterism,
- 2 Touching.

### CATHETERISM.

*Catheterism* is the introducing of a proper tube, called *catheter*, into the urethra and bladder,

† The second skull belonged to a twin child.

\* PLENCK's Elem. Art. Obst.

with a view to discharge urine unduly accumulated. To insure success, attention is necessary to the

- 1 Catheter, its form and size,
- 2 Posture of the patient.

The male practitioner ought to be capable to use the catheter without inspection, a task in general not difficult.

### TOUCHING.

*Touching* (exploratio obstetricia) has for its object the discovering from the state of the uterus and adjacent parts

- 1 Pregnancy,
- 2 Parturition,
- 3 Disease.

Successful exploration requires attending to

- 1 Instrument,  
  - Finger,*
  - Hand,*
  - Pelvimeter,*
  - Cephalometer,*
- 2 Posture,
- 3 Method

A precise acquaintance with the structure of the parts, the subject of this operation, is indispensable to success.

## II. PUERPERAL PHYSIOLOGY.

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**P**UERPERAL PHYSIOLOGY proposes for its principal object the explanation of the functions and uses of the female organs. The chief are,

- 1 Menstruation,
- 2 Generation,
- 3 Parturition.

### MENSTRUATION.

Menstruation is a peculiar act of the system, discharging periodically a quantity of blood from the uterus.

This remarkable circumstance of the female œconomy is entitled to special attention, as to,

- 1 Term,
- 2 Quantity,
- 3 Quality,
- 4 Duration,
- 5 Source,
- 6 Symptoms,
- 7 Causes,
- 8 Effects.



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#### TERM.

The usual interval between two consecutive menstruations is about twenty-seven or twenty-eight days, so that the *term* or *period* of return occurs about thirteen times during the year.

This process being thus more or less *monthly*, the effused fluid has been called *catamania*, *menfes*, *menstrual discharge*; and on account of its regularity of appearance and connection with health, it is very commonly named *courses* and *flowers*.

A fluctuation as to the term is consistent with health and the other functions.

#### QUANTITY.

The quantity of the *menstrual discharge* is various, according to habit and other circumstances; in general it amounts to six, eight, or ten ounces, often greatly exceeding this quantity.

#### QUALITY.

The quality of the *menfes* is healthful and sound, and by no means to be regarded as morbid or vitiated\*.

#### DURATION.

Each menstruation endures for several days, from three to eight or ten; so that it proceeds leisurely resembling an oozing or exudation.

The time of life, at which menstruation first occurs, is much varied, by climate, and other

\* LEVIT. chap. xv. 24. And if any man lie with a woman at all, and her *flowers* be upon him, he shall be *unclean* seven days: and all the bed whereon he lieth shall be *unclean*.

causes. In the southern latitudes, it happens as early as the eleventh year; in our country, it takes place about the fourteenth one, and often is postponed to the eighteenth and twentieth.

This event is a mark of the maturity of the system.

The term at which the menses finally disappear, is as various as that of its commencement: Indeed, both events seem to depend on the same primary causes; an early commencement and anticipated disappearance are connected. They cease in these climates when the female has attained her forty-fifth, or at most her fiftieth year, with few exceptions.

The menstrual flux is suspended during the pregnant and suckling periods; if it occurs during the former, it may be regarded as disease. (Menorrhagia catamenialis\*.)

#### SOURCE.

The source of the menses is unquestionably the extreme arteries which open on the surface of the lining membrane of the uterus. These appear to be the same with or very analagous to the exhalant arteries, so abundant on all other portions of the surface. Indeed, some authors have supposed the menstruating vessels to be peculiar in their structure.

\* PLENCK's Elem. Art. Obst.

## SYMPTOMS.

The eruption of the catamenial flux is often preceded by

- 1 Lassiitude,
- 2 Headach,
- 3 Pain,
- 4 Quickened pulse †.

## CAUSES.

It is difficult to point out, in a satisfactory manner, that state of the vessels of the uterus and system at large, which constitutes the proximate cause of the menstrual flux.

A degree of *plethora* or *fullness* of the vessels, is perhaps always very much concerned in exciting this phenomenon.

To decide whether this be *general* or *local*, does not seem to be a point of much moment, for the difference is only that of a *whole* and a *part*.

It is by far a more difficult business to assign the causes of the periodical return of this effusion, at intervals, so surprisingly equal. A reference to the changes of the moon is not a proper solution of the question.

May it not be the effect of that cause, which gives, in due season, the vegetation, flowering, &c. of plants?

† FOSTER'S Midwifery, p. 24.



EFFECT.

The final cause, purpose, or effect of menstruation, seems to be to preserve a condition of the uterus favourable to pregnancy; because, before its commencement, and after its total disappearance, and even during any remarkable irregularity, pregnancy does not happen.

GENERATION.

Generation, or the production of the *fœtus* or *embryo*, is the most astonishing fact in natural history, to which the mind can direct its attention; accordingly, in every age, it has been a darling subject of philosophical research. It is much to be regretted that a just explication of an event so interesting has not been its reward.

Generation may be considered as consisting in,

- 1 Conception,
- 2 Pregnancy.

CONCEPTION.

*Conception*, or *impregnation*, is the immediate formation or vivification of the *fœtus*.

It may be contemplated as to

- 1 Conditions,
- 2 Place,
- 3 Manner,
- 4 Number,
- 5 Symptoms,
- 6 Sterility.

## CONDITIONS.

The principal conditions are,

- 1 Maturity,
- 2 Health,
- 3 Sexual commerce.

## PLACE.

It seems to be tolerably well ascertained, that the ovaria or testes are the place in which conception is immediately transacted, these being the only feminal or proper genital organs on the part of the female. The proofs are

- 1 Turgescence of one or more vesicles,
- 2 Corpora lutea,
- 3 Fœtus in the ovarium.

## MANNER,

The following are the principal theories or hypotheses that have been proposed to explain the *manner* and phenomena of conception.

1 A mixture of feminal fluids jointly effused by the parents.

Hippocrates and other venerable ancients have favoured this doctrine.

With some slight diversification, it is ingeniously abetted by the COUNT DE BUFFON, who supposes, that, in consequence of the mixture of the feminal matter, which he presumes to abound

with *organic molecules* or *living particles*, derived from every part of the bodies of the parents, the *new system* of stamina is formed; these particles being *organized* according to determinate laws of attraction, perhaps somewhat like *crystallization*.

The COUNT has made many expensive and splendid experiments to illustrate his peculiar ideas; I shall be sorry if I have mistaken or distorted them \*.

2 One or more *ova* or *eggs*, supposed to be formed and pre-existing in the ovaria, are possessed and impregnated by one or more *little animals* (*homunculi*), which abound in the male liquor.

LEWENHOEK, HARVEY, GRAAF, SWAMMERDAM, and others, favour this sentiment.

3 The rudiments of the foetus (*germen, ebauche*) previously existing in the ovaria, are excited to life, or additional action and evolution, by the male fluid acting as a *stimulus*.

M. M. VALISNIERI, SPALANZANI, BONNET, &c. are abettors of this notion †.

Much ambiguity rests on each of these hypotheses.

The first is the most agreeable to the idea of conception, being the instantaneous production of the foetus, in consequence of sexual commerce.

The second, which presumes the existence of numerous animalcules in the male fluid, to which the ovum, furnished by the female, only affords a nidus or situation favourable to growth, is unsatisfactory; because it explains not the generation of these supposed animalcules.

The third, which is founded on a pre-existing

\* HISTOIRE Naturelle, tom. II. chap. iv.

† SPALANZANI's Dissertations, already quoted.



germen, labours under the objection stated to the second: For the generation of the germen remains to be explained.

The transference of parental likenesses, and even disease, are not sufficiently accounted for, on the supposition that the semen is a mere stimulus, and not a constituent matter.

It is evident that conception is an *organizing* act; when therefore philosophy is able to account for the astonishing *variety* of organization and its *effects*, we may reasonably expect some satisfactory theory of this important transaction.

#### NUMBER,

A plurality of foetuses are frequently conceived at once. The range as to number is from two to five \*, the low numbers oftenest occur.

#### SYMPTOMS OF INSTANT CONCEPTION.

- 1 Convulsive or creeping sensation in the course of the fallopian tubes and uterus,
- 2 Painful micturition,
- 3 Change of colour about the eyes,
- 4 Lassitude,
- 5 Heart-burn.

These signs are for many reasons fallacious, and are often not observed †.

#### STERILITY.

Sterility, or barrenness, may be considered as being a theme related to the preceding one.

\* HALLERI Physiolog. §. DCCCCXXIX. non raro femina geminos foetus parit; rarius paulo tres, neque unquam supra quinque.

† PLENCK's Elem. Art. Obst. p. 37. —

The causes of barrenness are,

- 1 Mal-formation of the genital organs,
- 2 Disease,
- 3 Obesity,

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### PREGNANCY.

*Pregnancy, gravidity, or utero-gestation*, is the existence of the foetus in the cavity of the uterus.

The complete foetal system is formed in the ovarium, and from thence transmitted by the uterine tubes generally to the cavity of the uterus, there to acquire growth and due maturity to be born.

The foetus is not always thus transmitted, but remains in the ovaria, in the tubes, or drops into the peritonæal cavity, or belly. It is then named *extra-uterine*.

Sometimes it takes this last situation after it has been lodged in the tube or uterus, in consequence of rupture.

The consideration of pregnancy may comprehend the following particulars :

- 1 Symptoms,
- 2 Nutrition of the foetus,
- 3 Circulation of the blood of the foetus,
- 4 Excrements of the foetus,
- 5 Regimen of the mother,
- 6 Term,
- 7 Superfoetation,
- 8 Monstrosity,
- 9 Mole.

## SYMPTOMS.

The *symptoms* of pregnancy may be viewed in two stages :

- 1 Incipient,
- 2 Advanced.

The incipient stage may be supposed to extend through the three or four first months of pregnancy.

During this early period it is not easily detected. It shews itself by the changes induced in

- 1 The whole of the system,
- 2 The uterus,
- 3 The adjoining organs.

The most authentic signs are,

- 1 Suppression of the menses,
- 2 Swelling of the breasts,
- 3 Anorexia, nausea, sickness, or vomiting,
- 4 Pica, vitiated appetite, or longing,
- 5 Paleness,
- 6 Increased weight and volume of the uterus,
- 7 Ascent, or elevation of the os internum.

The advanced stage, or utero-gestation, from its incipient state, to its termination may be detected with considerable certainty by attending to



- 1 The signs of the early stage, which become more marked;
- 2 Swelling of the hypogastrium;
- 3 Motion in the uterine region, perceived between the fourth and fifth months, called, on this account, the *quickening*;
- 4 Explanation of flatness of the navel;
- 5 Size of the uterus, and its gradual progress;
- 6 Obliteration of its cervix, and os internum;
- 7 Emaciation, hence the enlargement of the mouth, &c.

Some of these symptoms are equivocal. Our diagnostic is therefore to be drawn from a concurrence of several.

An explication of the aforesaid symptoms may be drawn from

- 1 Suppression of the menses,
- 2 Distension of the uterus,
- 3 Compression of the adjacent organs \*.

The chief diseases with which pregnancy may be confounded, are,

\* HALLERI Prim. Lin. § CCCCLXX. This noble and illustrious Author seems whimsically enough to refer some of the symptoms related to the absorption of a part of the male fluid become putrid in the cavity of the uterus. His words are, " Varias adfectiones incommodas nova mater eo tempore patitur, quas credas esse a resorpto semine masculino, subputrido et subacido. Fere enim ut ovi rancidi devorata particula, ita a conceptione nausea eiectur, etiam potissimum carniū, et vomitus, et pustulæ aliquæ erumpunt, dentefve dolent. Majora incommoda et tumori uteri, viscera abdominis comprimentis tribuo, et retentis mensibus."

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- 1 Dropsy,
- 2 Tympany,
- 3 Physconia.

An acquaintance with pathology leads to a pretty certain discrimination between pregnancy and the afore said diseases, or any others. Indeed, the advanced stage is scarcely to be mistaken.

### NUTRITION OF THE FŒTUS.

The fœtus may be nourished by,

- 1 Swallowing and digesting the liquor amnii ;
- 2 The mother's fluids carried through continuous vessels ;
- 3 *Absorption* performed by the placenta.

The last hypothesis affords a more full solution of phenomena than the others, and is generally supported by analogy.

- 1 The child may live after the liquor amnii is contaminated or discharged.
- 2 The headless fœtus may grow.
- 3 The child may remain healthy although the mother be considerably diseased.
- 4 No continuous vessels have been discovered\*.

\* I lately was requested, by Dr David Spence, to inject the vessels of a woman who had died during parturition. I made use of a solution of *glue* blended with vermilion, which many eminent anatomists think is better calculated to enter the small vessels than most other compositions usually employed.

Upon careful dissection, it appeared that not a particle of the in-

- 5 The chick in the egg lives by absorption.
- 6 All animals after birth live by it.
- 7 Vegetables suck their food from the soil and air.
- 8 The plants called *parasitæ* draw their food from others to which they adhere in this manner.

It is, however, not improbable, that a small quantity of the liquor amnii is swallowed from time to time : It may have excellent effects.

The foetal system thus appears to have the faculty to attract or absorb its proper food from the uterus, and to change, elaborate, assimilate, and nutritiously apply it, for it grows with astonishing rapidity, especially during early life †, so that, by the time of birth, its size and weight are as before stated.

jected matter had entered the vessels of the placenta or umbilical chord ; both which I examined attentively. Some clots of it were found between the uterus and the surface of the placenta.

This business has been misrepresented to Dr MONRO, because he quotes it as an instance in which the injected matter passed into the placenta, and even the umbilical chord, in a proof of the continuity of vessels, which, he affirms, exist between the mother and foetus, and are the channels of its nourishment.

It is surprising that a Gentleman of his superior understanding should so readily credit an unauthenticated narration : It perhaps may be accounted for from the keenness and ambition of system, which are sufficiently powerful to warp the judgment in most instances.

A sacred regard for truth is the only motive that makes me advert to this matter at present. I might otherwise remain very well contented with the seeming honour of having succeeded better in the injecting art, than any other anatomist I have ever conversed with, or heard of.

† HALLER's Physiology.



## CIRCULATION OF THE BLOOD OF THE FŒTUS.

In general, the blood circulates through the fœtal system as through the adult one. The chief peculiarities are,

- 1 Rate of motion, especially in the placenta.
- 2 Transmission through the heart and lungs.

## EXCREMENTS OF THE FŒTUS.

The food of the fœtus being considerably animalized, and consequently *proportionably freed from excrementitious matter*, while in the mother's vessels, affords but a small quantity of,

- 1 *Meconium* or *fæces*; none is ejected while in health.
- 2 *Urine*; perhaps this is wholly contained in the bladder or the urachus, which is not continued to the placenta, or to any allantois or cyst.
- 3 *Sweat* or perspirabile matter; this (if any), must be blended with the liquor amnii, which perhaps is itself a secretion from the surface of the fœtus.

## REGIMEN OF THE MOTHER.

The delicacy of the gravid female's situation obviously requires every attention that the human fruit may duly proceed to maturity. The *regimen* respects,

## PUERPERAL PHYSIOLOGY. 51

- 1 Air,
- 2 Food,
- 3 Drink,
- 4 Exercise,
- 5 Sleep,
- 6 Passions,
- 7 Excrements.

### TERM.

The child is carried in the uterus nine solar months, a period equal to thirty-nine weeks, or two hundred and eighty days; this is therefore the term of pregnancy\*. A small degree of fluctuation as to this circumstance is observable.

### SUPERFŒTATION.

Superfœtation is conception during pregnancy.

The possibility of this event is admitted by respectable authority †: It is said to have three variations; or the superfœtus may be in,

- 1 The single and already gravid uterus;
- 2 The double uterus, previously gravid in one cavity;
- 3 The uterus, while another fœtus is extra-uterine ‡.

\* HALLERI Physiolog. § DCCCCXVII. — PLENCK's Elem. Art. Obst. p. 32.

† HALLERI Physiolog. § DCCCCXIX. non dubium est, posse secundum fetum concipi dum prior in utero est, &c.

‡ PLENCK's Elem. Art. Obst. p. 90.

Much deception has taken place as to this matter.

### MONSTROSITY.

*Monstrosity* is an unusual conformation of the fœtus, on this account called a *monster*.

Lusus naturæ, or deviations from the ordinary structure and arrangement, which happily are rare, may consist in,

1 *Deficiency*; no head, no mouth, no ears, no arms, &c.

2 *Redundancy*; two heads, (caput bicephalum) two trunks, (gemini concreti) supernumerary arms, legs, fingers, toes, &c.\*

\* LINDSAY OF PITSCOTTIE'S History of Scotland, p. 160, 104.

" A bairn was born reckoned to be a man-child; but, from the waste  
 " up, was two fair persons, with all members and portraitures pertaining  
 " to two bodies, two heads well-eyed, well-eared, and well-hand-  
 " ed. The two bodies, the one's back was fast to the other's; but,  
 " from the waste down, they were but one personage, and could not  
 " know, by the ingine of man, from which of the two bodies the legs  
 " and privy members proceeded. Notwithstanding the King's Majesty  
 " ty caused take great care and diligence upon the upbringing of two  
 " bodies in one personage, caused nourish them, and learn them to  
 " sing and play upon instruments of music; who, within short time  
 " became very ingenious and cunning in the art of music; whereby,  
 " they could play and sing two parts; the one on the treble, and the  
 " other on the tenor; which was very dulce and melodious to hear.  
 " The common people, who treated them also, wondered that they  
 " could speak diverse and sundry languages; that is to say, Latin,  
 " French, Italian, Spanish, Dutch, Danish, English, and Irish. Thir  
 " two bodies long continued, to the age of twenty-eight years; and  
 " the one departed long before the other, which was dolorous and  
 " heavy to the other; for which many required of the other to be mer-  
 " ry. He answered, " How can I be merry, that have my true mar-  
 " row as a dead carrion about my back, which was wont to sing and



- 3 *Obstruction* ; anus imperforatus, &c.
- 4 *Concretion* ; webbing, &c.
- 5 *Malformation* ; harelip, club-feet, &c.

CAUSES.

It is an obvious point, that, till the generation of the perfect animal be accounted for, it must be highly absurd to give any theory respecting monstrosity.

Referring this accident, in any degree, to the working of the mother's imagination, is not only

" play with me. When I was sad, he would give me comfort, and I  
" would do the like to him. But now I have nothing but dolour of  
" bearing so heavy a burden, dead, cold, and unfavoury, on my back,  
" which taketh all earthly pleasure from me in this present life:  
" Therefore I pray to Almighty God, to deliver me out of this present  
" life, that we may be laid and dissolved in the earth, wherefrom we  
" came."

" There was a bairn which had both the kinds of male and female,  
" called in our language, a Scarcht ; in whom man's nature did pre-  
" vail ; But because his disposition and portraiture represented a wo-  
" man, in a man's house in Linlithgow, he associated in bedding with  
" the goodman's daughter of the house, and made her to conceive a  
" child. Which being devulgate through the country, and the ma-  
" trons understanding this damsel deceived on this manner ; and be-  
" ing offended that the monstrous beast should set himself forth as a  
" woman, being a very man, they got him accused and convicted in  
" judgment, for to be burnt quick for this shameful behaviour."

A tradesman's wife at Roberisbridge, in Suffex, was delivered by Mr Noakes, a Surgeon and Man-midwife there, of a child which had two perfect heads, four thighs, four legs, and four feet, but with only one body. It is of the female sex, and from the description we had of it, somewhat resembles a child born at Uchaton, in Flanders, described by Aristotle. Some small signs of life, we hear, were discovered in one of its heads, when first born, but they almost instantly vanished.

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ridiculous and whimsical, but pernicious; because it is observable among the brutes, birds, and other orders of animals, and among vegetables; and when credited is productive of much unhappiness.

### MOLE.

A *mole*, (*mola*) or *false conception*, is the existence of a rude flesh-like mass in the uterus.

### CAUSES.

The mole is perhaps caused by,

- 1 The placenta, &c. of a degenerate foetus, continuing to grow after the foetus itself has been destroyed, (*Mola simplex*);
- 2 Portions of the placenta or membranes remaining after abortion or delivery, increased in bulk by the coagulable matter of the blood;
- 3 The coagulable part of the blood alone condensed after hæmorrhage, (*Mola spuria*).

In whatever way, or by whatever cause produced, the mole acquires the shape of the uterine cavity, and various bulk; and, after perhaps some months retention, is spontaneously expelled.

It is supposed that the mole and foetus may be present in the uterus together; this concurrence is called *mola mixta* \*.

### PARTURITION.

Parturition is the timely expulsion of the foetus from the uterus.

\* PLENCE'S Elem. Art. Obst. p. 92.

This striking event and its various accidents are the grand objects of midwifery ; here, however, they are to be considered merely in a physiological light.

The view of this operation may be comprehended under these heads :

- 1 Previous symptoms,
- 2 Symptoms of its presence,
- 3 Causes,
- 4 Progress,
- 5 Management of the mother,
- 6 ————— of the child.

#### PREVIOUS SYMPTOMS.

Parturition, about to take place, is discerned by,

- 1 An unusual mucous discharge ;
- 2 An irksome sensation about the os internum ;
- 3 Altered shape of the belly ;
- 4 Membraneous state
- 5 Beginning dilatation
- 6 Laxity of the vagina and os externum.

These circumstances are a prelude to,

#### SYMPTOMS OF PRESENT PARTURITION.

Parturition is known to be begun by

- 1 Pain in the loins and adjacent parts ; increasing at intervals ;
- 2 Tenesmus, or pressure downwards, accompanying the pain, and keeping proportion to it ;



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3 Tension of the belly, and retention of the breath, during the pain;

4 Painfulness about the pelvis when the body is moved;

5 Desire to void the urine and fæces, even when there is no accumulation.

6 Considerable dilatation of the os internum, and this increased during a pain, so that the chorion may be felt.

Pains not of this description are called *false* (dolores spurii). When true and false concur, they are called *mixed pains* (dolores mixti).

### CAUSES.

Parturition very constantly takes place with wonderful exactness after the expiration of the specified term of pregnancy, notwithstanding the very different sizes of mothers and children. A degree of fluctuation, however, is sometimes to be marked \*. An anticipation is *premature birth* (partus præmaturus); a protraction is *postmature delivery* (partus serotinus) †.

The cause most immediately efficient in exciting parturition is, in general, the extreme distension of the uterus; but, in many cases, this does not seem to exist, and it is difficult to discover others.

\* HALLERi Physiol. § DCCCXXVII. Tempus partus nonnum solari-  
bus mensibus emensis ingruit, in omnibus animalibus perinde definitum,  
etsi aliquot septimanas per suas causas, aut accelerari potest, aut retar-  
dari, &c.

\* PLENCK's Elem. Art. Obst.

The distension acts as a stimulus, resembling that caused by fæces in the rectum; in consequence the muscles of respiration, particularly the diaphragm and abdominal ones, are thrown into strong action, which compresses proportionally the uterus, and puts the os internum on the stretch.

This co-operation, or joint effort of these muscles, constitutes and is called *a labour-pain* or *throe*.

The painful sensation, which occasions the complaining, is the immediate effect of the distension produced by the muscular contraction.

The contractility of the uterus itself, which is comparatively weak, is perhaps not so efficient in this process as has been commonly supposed\*. It does not, by any means, resemble ordinary muscular action.

#### PROGRESS.

The labour-pains by degrees become more and more frequent and strong, and propel the head, or other part of the child, which may be felt, towards the os internum.

The membranes, especially during a pain, are tense, like a bladder distended with water, and protruded through the os internum, now considerably opened. Unsupported at this point, they are burst asunder, and allow the liquor amnii to

\* HALLERI Physilog. § DECECXXVIII. Uterus contractili vi fetum constrictus urget, qui *Solus* etiam absque nixu matris. fetum nunquam expellit.

be suddenly discharged, an event called by the women the *breaking of the waters*.

The expulsive efforts are increased for the most part after the rupture of the membranes; because the head, which is the part most commonly presented, is then more closely applied to the os internum.

The head, with its vertex undermost, and the face turned to the side, passes the brim, and when lodged in the pelvis, is said to be in the bones. A shivering fit frequently ensues.

The resistance at the sides, and posterior part of the bottom of the pelvis, compels the head to move about its axis, so that the vertex is presented to the os externum, while the face is in the sacral concavity.

The vertex soon distends the os externum and perinæum like a great tumour, the anus is dilated, and fæces in the rectum are ejected.

The head is at length born, by the vertex moving forwards and upwards, so that the face emerges from the perinæum as from behind a large valve.

The mother's cries, during this event, are exceedingly strong, expressive of the racking anguish she suffers.

The trunk and limbs, in consequence of the preceding contractions, are soon expelled.

It must be evident, that the child is entirely passive during parturition, or that this process does not depend on its activity; consequently it is as readily performed although the child be dead, as when alive.

A quantity of blood, amounting commonly to about a pound, is suddenly discharged after the expulsion of the child, which seems to have



been gradually poured out from the uterine vessels, during the latter part of the process.

Parturition cannot be regarded as completed, till the after-birth be discharged, because it is a part of the foetal system.

The placenta, somewhat disengaged from the uterus, before the other parts of the child are expelled, is gradually loosened entirely, and thrown off by the pains, the same with those which had acted hitherto.

This expulsion of the placenta is effected with various expedition, most commonly within an hour or two after that of the child; and is succeeded by a discharge of blood, often exceeding the quantity formerly effused.

This hæmorrhage gradually subsides, and for the most part disappears within two or three days. It is termed *lochia*, and *lochial flux*, and by the women the *cleansing*.

Parturition is thus commonly completed within twelve hours, a day, or a day and a half. The process is rather tedious, if it be protracted through two days.

During the second or third day after parturition, when the lochial flux has abated, the breasts begin to be more or less painful, hard, and swollen, and sometimes fever (*febris lactea*) succeeds.

These effects result from the change of the milk-glands, now proceeding rapidly in their proper function.

## MANAGEMENT OF THE MOTHER.

Parturition, proceeding in the way described, is in every respect *an action of health*. The accoucheur must not therefore consider the mother as under *disease*, and imagine that the interference of art is, strictly speaking, necessary to its successful issue.

It must however be admitted, that a proper plan of management renders the child-bed state not only less irksome, but less dangerous, than it otherwise might be.

The principal circumstances requiring attention are the

- 1 Chamber,
- 2 Bed,
- 3 Dress,
- 4 Posture,
- 5 Food,
- 6 Drink,
- 7 Temperature,
- 8 Excretions,
- 9 Interference.

---

 CHAMBER.

The chamber ought to be large and well aired, at same time capable of being rendered close and warm occasionally.

### BED.

A construction of the bed-frame, permitting easily any requisite removal from place to place, is preferable.

The mattrafs, covered on its upper side with oil-cloth, &c. gives obvious advantages.

The bed-clothes light, and tacked together, permit commodiously necessary changes.

### DRESS.

The mother's dress ought to be such as favour

- 1 Temperature,
- 2 Cleanliness,
- 3 Removal.

### POSTURE.

The posture during delivery may be various :

1 The *sitting attitude*, procured by a means of a *chair* or *stool* of suited constructions \*.

2 The *kneeling situation*.

3 *Supine posture*, or *lying on the back*, the breech projecting over the bed.

4 *Lateral position*, or resting on the side, while the knees are drawn somewhat upwards, and the

\* HEISTER, PLENCK, &c. give drawings of obstetrical stools and chairs.



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whole of the body is within the bed, and covered by the bed-cloaths.

### FOOD.

A small quantity of food, light, and of easy digestion, is generally sufficient.

### DRINK.

Plentiful draughts of plain, weak, cold drink are highly proper and acceptable, on account of the thirst caused by exertion, screeching, &c.

### TEMPERATURE.

The usual temperature may be supported.

### EXCRETIONS.

The excretions alluded to are these from

- 1 The bladder;
- 2 The rectum.

### INTERFERENCE.

The aforesaid attentions nearly comprehend the whole of the office of the accoucheur. His interference ought to be as little as possible. Officiousness in the present circumstances is, in the eye of discernment, not only odious, but injurious.

After the progress of parturition is ascertained by touching, it is unsuitable conduct to repeat the exploration too often.

The less handling the better.

Moderately supporting the perinæum, when much distended, is not likely to do any harm, although perhaps it is a measure not strictly necessary.

Any drawing by the head of the child, with a view to hasten the delivery of the trunk and legs, is both unnecessary and hurtful. It is sufficient to *support* and *receive* the child.

This last remark applies fully to the birth of the placenta.

It seems to be an unnatural and rigorous measure, to confine the mother to bed during the child-bearing process; on the contrary, her feelings are soothed by rising up, and even walking.

Compressing the belly by *swathes* or *bandages*, with a view perhaps to favour the contractions, immediately after delivery, does not seem to be demanded by nature: If at all adopted, it ought to be in the slightest degree.

Passiveness on the part of the mother, or abstinence from all motion or exertion, for a considerable time after delivery, is, in every view, likely to prove salutary\*.

#### AFTER-PAINS.

The after-pains, of various acuteness and duration, deserve enquiry, as to

\* In the EDINBURGH LYING-IN HOSPITAL, the *obstetrical couch* is so constructed, that the person lies upon it, for a requisite space of time after the delivery, as if she were in an ordinary bed.

- 1 Cause,
- 2 Alleviation.

## MANAGEMENT OF THE CHILD.

The new-born child is to be laid in an unconstrained attitude, so that the mouth may be properly exposed to favour the commencing of respiration, a process now indispensable to existence.

The circumstances in the foetal œconomy, which hitherto rendered respiration unnecessary, and the causes of the establishment of this important function, immediately after birth, are points, which, notwithstanding the ingenious labours of physiologists, still admit of much illustration.

Regular breathing begun, which is known by crying, and preceding sighs, attention is necessary to

- 2 The chord,
- 2 Visitation,
- 3 Applications,
- 4 Dress,
- 5 Nursing.

## THE CHORD.

The temporary part of the child's system which would without doubt fall off spontaneously, may be separated by securely tying the umbilical chord



about an inch or two from the umbilicus, and cutting it a little beyond the ligature †.

The remaining portion of the chord, lapped in soft rag, and reflected along the belly, withers and falls off in a few days.

The navel, for some time afterwards, may be covered with a bit of lint spread over with sweet butter or oil \*.

### VISITATION.

Visitation is a careful inspection of the various parts of the child, particularly the outlets or passages, that, in case of malformation or obstruction, the proper plan of cure may be adopted.

### APPLICATIONS.

It is too common to make improper applications to the child, as well externally, as internally, such as *spirits* to the scalp; and *salt*, &c. internally: the last intended to discharge the meconium.

The truth is, that nature seldom needs these; they are therefore violence and injury; for the transition, or changes the child is subjected to, ought to be as gentle and gradual as possible: †

It is sufficient to wash off any filth with tepid water; and even this is not always necessary.

### DRESS.

The dress, consisting of few pieces of soft ma-

† PLENCER'S Elem. Art. Obst. p. 67. He advises the tying to be made five or six inches from the navel.

\* In one case after the dead portion of the chord separated, a hemorrhage ensued, which it was scarcely possible to stay; indeed it produced fatal effects.

† GREGORY'S Comparative View.

terials, sufficient to insure due warmth, ought to give no unnecessary constraint or pressure, and to be put on with the utmost caution and tenderness.

### NURSING.

The first food for the infant is the mother's milk, which may be given as soon as possible: This measure is equally advantageous to both.

If necessity deprive the child of the natural support that ought to be afforded by the mother, a proper nurse must be proposed.

The chief requisites in a nurse are,

- 1 Youth,
- 2 Health,
- 3 proper breasts and nipples,
- 4 Plentiful secretion,
- 5 Watchfulness.

The milk of the cow, &c. may be substituted instead of human milk, when circumstances demand it; or mild compositions of the animal kind, viz. infusion of beef, &c. in water, with an admixture of fine bread

Any of these may be administered in small quantities at one time, and repeated at suitable intervals.

The rearing of infants without suckling, or by the spoon, as it is commonly called, as far as my observation extends, has been very unsuccessful in this country: A great proportion of them perishes: Indeed, such a violent deviation from the line of nature cannot take place with impunity.

The suckling term is in general too much abridged, in opposition to the salutary and general principle mentioned above.

The weaning (*ablactatio*) in conformity to the aforesaid doctrine, ought to be a gradual, not a sudden business, so that the digestive organs may be accustomed to retain and assimilate matters much less animalized than these which they had hitherto chiefly acted on.

Want of attention to this maxim every day occasions the destruction of thousands of children.



# PHYSIOLOGY OF THE HUMAN BODY

The following is a general description of the human body, in its various parts and organs, and the functions which they perform. The human body is composed of many different parts, each of which has its own special function. The most important of these are the brain, the heart, the lungs, the stomach, and the intestines. The brain is the center of the nervous system, and it controls all the other parts of the body. The heart is the pump which circulates the blood throughout the body. The lungs are the organs which take in oxygen and give off carbon dioxide. The stomach and intestines are the organs which digest the food and absorb the nutrients. The human body is a very complex machine, and it is the result of many years of evolution. It is the most advanced of all the animals on earth, and it is the only one which has the ability to think and reason.

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### III. PUERPERAL PATHOLOGY.

**P**UERPERAL PATHOLOGY includes the *history* and *cure* of every symptom connected with the child bed-state, that partakes of a *morbid* nature, or can be regarded as *disease*.

#### KINDS OF PARTURITION.

Parturition is

- 1 Ordinary,
- 2 Extraordinary.

This last is subdivided into

- 1 Lingering,
- 2 Præternatural.

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#### ORDINARY PARTURITION.

Parturition is *ordinary* \* when the *vertex* of the child is presented, and the process expeditiously and happily completed.

This being altogether a healthful operation, its consideration is properly a subject of physiology.

#### EXTRAORDINARY PARTURITION.

Parturition is *extraordinary*, † when there oc-

\* *Synonymes*—natural, common labour or travail.

† *Synonymes*—dystocia, atocia, partus difficilis, uncommon, non-natural, difficult labour or birth.

curs any remarkable deviation from the ordinary kind.

### LINGERING PARTURITION.

Parturition is *lingering* when the process is unusually protracted, although the child's vertex be presented as in ordinary labour \*.

### CAUSES.

Before any rational attempts can be directed to obviate the lingering, an attentive enquiry must be made into its causes. The most considerable of them are,

#### ON THE PART OF THE MOTHER,

- 1 Distortion,
- 2 Rigidity,
- 3 Obliquity,
- 4 Cessation,
- 5 Sarcoma,
- 6 Dropsy,
- 7 Distortion,
- 8 Inflammation,
- 9 Spasm,
- 10 Corpulence,
- 11 Hyfterocele,
- 12 Deformity,
- 13 Debility.

#### ON THE PART OF THE CHILD,

- 14 Monstrosity,
- 15 Swelling,
- 16 Membranes,
- 17 Chord.

\* *Synonymes*—laborious, non-natural birth. See SMELLIE, OSBORN,



These causes require the most accurate investigation, that, by a judicious and solid practice, they may, as much as possible, be removed, and their effects obviated.

Some of these are exceedingly formidable, and place the accoucheur in the most critical and trying situation.

## ON THE PART OF THE MOTHER.

### DISTORTION.

*Distortion* is any deformity of the bones of the pelvis, whereby their usual or standard dimensions are impaired.

Distortion may be considered as to

- 1 Symptoms,
- 2 Causes,
- 3 Manner,
- 4 Degree,
- 5 Effect,
- 6 Practice.

### SYMPTOMS.

- 1 Deformity of the spine or limbs.
- 2 Detention of the child's head at the brim of the pelvis, after a continuance of strong pains.
- 3 The state of the scalp of the child. It is swelled proportionally and gives the *sugar-loaf* and *mould-shot* head.

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3 Narrowness, discovered by touching, or measuring internally and externally, by

- 1 The hand,
- 2 A simple scale \*,
- 3 A pelvimeter †.

### CAUSES.

- 1 Rickets,
- 2 Rheumatism.

### MANNER.

The brim is most frequently impaired in its short diameter by the promontory of the os sacrum, or the ossa pubis, or both, projecting unusually towards the axis.

At the bottom, it is altered in one or both diameters, by the mutual intrusion of the opposite points.

### DEGREE.

The degree of distortion, or quantity of the loss of capacity is various. In some instances,

\* I have marked a scale of inches and parts on the female catheter, to measure the short diameter; by this means the instrument answers a double purpose.

† M. COUTELAY, of Paris, invented an *internal* pelvimeter, to measure the short diameter. See his table.

DR STEIN, of Hesse-Cassel, has constructed an *external* pelvimeter.

I have devised a very simple one, calculated for the internal and external measurement, in every way, and with all possible ease and accuracy.

not an inch of the short diameter has been left\*. It can only be precisely known by the pelvimeter, an instrument consequently of the greatest utility.

### EFFECT.

Labour proportionally lingering is a necessary effect of every degree of distortion.

The transmission of a full-sized living child becomes impracticable, after the short diameter is reduced below *three inches* †.

*An inch and an half* of short diameter is a space barely compatible with piece-meal extraction, by the most dexterous use of instruments ‡.

### PRACTICE.

The practice, or assistance during lingering birth, from distortion, must be judiciously accommodated to circumstances, after the most scrupulous examination.

While delivery of the living child is possible, no interference incompatible with this event is admissible. Indeed, no assistance whatever is to be administered till the pains have had a full exertion; they are often unexpectedly successful.

\* Essays and Cases in Surgery, which I lately published.

† I am willing to fix the point of impossible transmission as low as may be. One somewhat higher has been assigned: "*La diametre qui traverse la tete d'un enfant a sa naissance a pour le moins trois pouces un quart.*" See ALPHONSE DU ROI, Recherches sur la Section du Pubis.

‡ OSBORN on Laborious Parturition.



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When the expulsive power is evidently unequal to delivery, cautious attempts may be made to promote the passage of the head, by

- 1 The hands,
- 2 The lever,
- 3 The forceps.

### THE HANDS.

The hands may be alternately introduced to attempt to move the head, wedged in the brim, from side to side, with a view to change the point of resistance.

### THE LEVER.

The *vectis* or *lever*, is ill-named ; for it resembles the hand more than a proper lever : It is

- 1 Common or rigid\*,
- 2 Living or flexible†.

It may be alternately applied to opposite points, or its effect may be furthered by the hand.

\* The common lever seems to have been first introduced by ROBN-HYSE.

† The *living* lever is so contrived, that it becomes straight to favour occasionally its introduction. It then resumes a curvature exactly proportioned to the convexity of the part of the child on which it is applied ; in consequence, its pressure is more diffused and less injurious.

### THE FORCEPS.

The forceps is an instrument resembling a pair of hands, calculated to comprehend the child's head, and urge it safely along; which it does to most advantage when the head is so advanced that the face is in the sacral cavity\*.

### INTRODUCTION OF THE LEVER AND FORCEPS.

The lever, and forceps are introduced precisely in the same way.

The lever or the blade of the forceps, after being gently heated by tepid water or otherwise, and done over with fine sweet oil, butter, or pomatum, is guided along the hand, (which being previously introduced serves as a conductor), with its concavity towards the axis of the pelvis, till it be certainly in contact with the head, or other

\* HIPPOCRATES mentions a forceps for extracting the dead child.

ALBUCAZIS describes one for delivering the living child.

CHAMBERLAIN is the first modern who introduced the instrument into general use.

SMELLIE improved the form of it.

LEVRET gave it a lateral curvature somewhat suited to that of the axes of the pelvis.

LEAK added a third blade. See his introductory Lecture.

I have improved the manner of locking or connecting the blades, so as to prevent the possibility of catching and wounding the mother's parts, or bruising unduly the child.

I have likewise constructed this instrument on the principle of the living lever, and of course it is named *living forceps*; an improvement in many situations highly important.

part to which it should be applied, so as to include no part of the mother, and securely maintain its hold.

The exertion, or drawing with these instruments, is fitly made in the direction of the inferior axis of the pelvis; at first it is to be very gentle, and repeated at intervals, so as to imitate the pains.

The lever is exceedingly powerful, and at same time more extensively applicable than the forceps; for it may be used in every point of progress.

The aforesaid instruments, however artfully and judiciously constructed, and cautiously managed, always do some injury; they are never, therefore, to be used without necessity.

The supine posture of the mother, her breech projected a little over the bed's edge, and the accoucheur seated before, on a low chair, is a disposition the most favourable to a free use of these instruments.

---

If the distortion be discovered to be so great as to render the transmission of a living child impossible, recourse must be had to one or other of these operations.

- 1 Pelvotomy,
- 2 Embryotomy,
- 3 Hysterotomy,
- 4 Gastrotomy.

#### PELVITOMY.

Pelvotomy, (Pelvitomia,) is the cutting of the



symphysis pubis, with a design to increase the capacity of the pelvis, by permitting the anterior extremities of the ossa innominata to precede from one another\*.

This operation may be considered as to,

- 1 Purpose,
- 2 Indication,
- 3 Manner,
- 4 Objections,

#### PURPOSE.

The purpose of pelvotomy is the preservation of the child; it ought therefore never to be practised when this is impossible:

Much previous attention is necessary to the

- 1 State of the child,
- 2 Degree of distortion.

\* *Synonymes*—*Sectio symphysis pubis, synchondrotomia, sigaultian, operation, &c.*

It was invented by M. SIGAULT of Paris, and successfully performed in 1777.

The ossa innominatos, at their anterior extremities, were separated somewhat more than two inches and an half, and a living child was transmitted through a pelvis, of which the short diameter was only two inches and an half; the recovery was happy.

Since the above period, the sigaultian section has been performed nearly thirty times with various success.

The latest instance was in August last at Paris—The operator was M. DE MATHIS. See London Medical Journal, vol. v. No iii.

## INDICATION.

This operation is indicated, and likely to succeed, when about *half an inch* of addition to the short chamber is sufficient to allow the transmission of the child.

Performing it when a greater addition is necessary brings disgrace on the operation, which plainly appears to be incapable to supersede embryotomy in all instances, much less the Cæsarean section.

## MANNER.

The mother, placed in the supine attitude, the manner is this:

A longitudinal incision is made through the integuments and linea alba, extending from a point about four inches above the symphysis pubis, nearly to the orifice of the urethra, carefully avoiding the peritonæum. This permits the separation of the bones.

The cartilage, or symphysis, is next carefully divided, so as not to wound the bladder and urethra.

If the urgency of the pains be insufficient to produce a due separation of the bones, the thighs are drawn asunder till this take place, that the delivery may be completed.

The proper treatment of the wound is a circumstance of great importance.

## OBJECTIONS.

The principal objections to pelvotomy, are,  
1 That the cartilages may happen to be ossified\*.

\* A flexible saw, which I have contrived to be used when there is ossification, infallibly removes this objection.

2 That the neck of the bladder may be wounded †.

3 That the space gained may not be sufficient, in a narrow pelvis, to permit parturition.

4 That the union of the cartilages may not take place.

5 That the internal posterior ligaments may be torn asunder †.

6 That the cellular connection between the bones and soft included parts, must be much disturbed or destroyed.

7 That the admission of the air, to parts not calculated to resist its impression, may be highly dangerous.

8 That the soft parts may be so compressed betwixt the child and the margins of the divided bones, as to cause dangerous consequences.

9 That there is, after all, but a small probability of saving the child \*.

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### EMBRYOTOMY.

*Embryotomy*, (*Embryotomia*, *Embryulcia*) is diminishing the child's size by incision, that it may be transmitted through the distorted pelvis.

This operation is named,

1 *Excerebration*, (*excerebratio*, *cephalotomia*) when it lessens the head by extracting the brain ;

2 *Evisceration*, (*evisceratio*), when it diminishes

† I have invented a *flexible* knife, which cuts from within, outwards, and therefore obviates this objection.

‡ LEAK'S diseases of women.

MICHEL'S *synchondrotomia*, p. 201. This author has treated his subject very fully.

\* OSBORN'S laborious parturition.



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the trunk, by discharging the contents of the breast and belly.

The former, which is most frequently performed, may be considered as to,

- 1 Indication,
- 2 Manner,
- 3 Instruments.

### INDICATION.

It is indicated when the distortion is so great as to render the passage of the child impossible by the methods already described, so as to save the mother's life, which is comparatively the most valuable.

It ought not to be too long postponed, when this circumstance is ascertained.

On the other hand, it is clearly not to be attempted, if the contraction exist to such a degree as to render the extracting of the child impracticable: Any space less than *one inch and an half* of short diameter, the breadth of the basis of the child's skull, has this effect \*.

### MANNER.

An incision or perforation, is made into the

\* OSBORN'S laborious parturition. He seems to set by far too low a price on the unborn child. I am afraid lest the specious arguments of this ingenious author should induce practitioners to recur to excerebration without proper warrant.

most accessible part of the child's head, of sufficient size to permit the brain to be broken down and discharged through it.

The head necessarily shrinks in consequence of the evacuation of the skull, so that sometimes the child is soon afterwards expelled by the pains: If not, it is to be extracted.

### INSTRUMENTS.

Embryotomy instruments, calculated for excerebration, are,

- 1 Perforating,
- 2 Extracting,
- 3 Perforating-and-extracting.

### PERFORATING.

- 1 ALBUCASIS' two formæ spatumiles,
- 2 MAURICEAU's perforator,
- 3 OULD's terebra occulta,
- 4 SIMPSON's ring-scalpel,
- 5 SMELLIE's scissars,
- 6 DENMAN's perforator,
- 7 Embryotomy knife,
- 8 Finger-scalpel.

### EXTRACTING.

- 1 ALBUCASIS' forma uncina simplex,
- 2 PARE's pes gryphii,
- 3 PARE's forceps longa and terfa,
- 4 Straight-hook or crotchet, (uncus),

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- 5 Blunt-hook,
- 6 Flexible blunt-hook,
- 7 MAYNARD'S crotchet,
- 8 MAURICEAU'S tire-tete,
- 9 PLENCK'S toothed forceps,
- 10 LEVRET'S extractor,
- 11 Scissar-forceps,
- 13 Double forceps,
- 14 Lithotomy-forceps.
- 12 Flexible crotchet,

### PERFORATING-AND-EXTRACTING.

- 1 ALBUCASIS' almisdach,
- 2 ALBUCASIS' misdach,
- 3 ALBUCASIS' forfex,
- 4 PARE'S extractor, or pes gryphii,
- 5 BURTON'S extracting terebra,
- 6 Scissar-forceps.

In general DENMAN'S perforator and MAYNARD'S crotchet are sufficient. In proportion to the narrowness of the pelvis, the others become necessary.

When the pelvis is known to be distorted, so as to render the birth of a living child impossible, is it not lawful and proper to prevent the dangers of embryotomy, by inducing early abortion?

---

### HYSTEROTOMY

*Hysterotomy*, or the Cæsarean operation, or hypogastric section, is the extraction of the child through an incision of the uterus.



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This operation may be considered as to

- 1 Indication,
- 2 Manner.

### INDICATION.

Hysterotomy is indicated when

- 1 The pelvis is too much contracted to admit of delivery by the explained methods ;
- 2 The mother, near the time of delivery, dies suddenly, and the child survives ;
- 3 Hysterocoele is present ;
- 4 The vagina is absent, or situated above the os pubis \*.

### MANNER.

A longitudinal incision, beginning about two inches above the umbilicus, and ending at a like distance from the ossa pubis, is made either in the linea alba, or a little to one side of it, so that the abdomen may be opened without wounding any of the contents.

Another one, coinciding with the direction of the first, is carried through the middle of the anterior part of the body of the uterus, of sufficient extent to permit the extraction of the child.

The wound of the abdominal containing parts is closed, and the lips of it joined in mutual contact, by a combination of the *twisted* and *dry* sutures †.

\* PLENCK's Elem. Art. Obst.

† AITKEN's Elements of Physic and Surgery, vol. ii. *Gastrography*.

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This formidable operation, intended to save mother and child, has been performed during many centuries, with various success †.

In Britain it has never fully had the desired effect, all the mothers having died ||.

Is it not practicable to supersede embryotomy and hysterotomy almost always by a *pelvitomia nova*? viz.

Four incisions, two reaching to the ossa pubis, as near the crural vessels as safely may be, so that the one may be distant from the other about four inches; and two corresponding to and touching the joinings of the ossa pubis and ischiorum.

The bones, brought in view by these incisions, are divided by the *flexible saw*, without wounding the peritonæum, bladder, or vagina.

Thus the *anterior segment* of the pelvis becomes *moveable*, and yields to the pressure of the child, so as to permit delivery.

If due attention be paid to the wound, the healing may take place in such sort, that sufficient capacity of the pelvis may be preserved \*.

† MICHEL Synchrondrotomia, p. 214. This author gives an extensive history of hysterotomia.

OSBORN'S Laborious Parturition, p. 241. This sensible writer enters into a short speculation regarding the merits of the Cæsarean operation.

Would performing it while the parts are immersed in tepid water, by secluding the air, tend to diminish its fatal effects?

|| I saw it performed in the Royal Infirmary of this city. The unhappy victim died about twenty-four hours afterwards. I have been informed that a sufficient indication was wanting.

\* I am just now employed in trying the effect of this operation on brutes.

## GASTROTOMY.

*Gastrotomy* (*Gastrotomia*) is the incision of the abdominal containing parts, to allow the trans-  
mission of the child.

## INDICATION.

Gastrotomy is proper when

- 1 The child falls from the uterus, through a laceration, into the belly;
- 2 The child is extra-uterine †.

---

## 2. RIGIDITY.

*Rigidity* is an undue resistance of the os inter-  
num or externum, or both, retarding delivery.

This rigid state is chiefly to be found in the el-  
derly female in child-bed for the first time.

It is discovered fully by attentive touching.

## REMEDIES.

This affection for the most part gradually gives  
way to the continued pressure or pains. Some  
diminution may be obtained by

† PLENCK's Elem. Art. Obst.



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- 1 Blood-letting, when the mother is vigorous ;
- 2 Opium,---ol. anodynum,
- 3 Emollients,---oil, tepid water, &c. } locally ;
- 4 The hand, acting as a speculum uteri † ;
- 5 Incision ||.

---

### 3. OBLIQUITY.

*Obliquity* (Hysteroloxia) refers to the position of the uterus, especially the os internum, with respect to the pelvis.

Such a degree of obliquity as is capable to give lingering labour seldom exists.

It is most likely to take place in a forward direction, the fundus hanging pendulous over the ossa pubis, so as to receive the action of the expelling muscles unfavourably.

#### REMEDY.

Pressing the fundus into its proper situation as much as may be, and supporting it by flannel swathes, seem to be all the remedy this case admits of.

‡ The *speculum matricis* of the ancients, particularly the *vertigo Alucafis*, seem to have been partly intended for this purpose.

|| SMELLIE's Cases.

PLENCK's Elem. Art. Obst.—A remarkable case of rigidity, or narrowness of the os externum, yielded without any extraordinary application.

#### 4 CESSATION.

*Cessation*, or want of pains, is not unfrequently the cause of lingering parturition. A careful investigation is necessary to discover it to be the sole one or not.

#### CAUSES.

It may flow from want of

- 1 Stimulus,
- 2 Strength.

#### REMEDIES.

When cessation depends on the first cause, in consequence of a change of the state of the child, or os internum, the pains spontaneously return; they may, if necessary, be promoted by

- 1 Dilatation,
- 2 Stimulant injections.

When failure of the expulsive power is discovered to be the effect of lengthened fatigue (the pulse and the complexion are the surest marks of this), we must administer

- 1 Nourishing food,
- 2 Cordials.

5 SARCOMA

*Sarcoma* is a flesh-like mass, which, under the name of *polypus*, sometimes obstructs the vagina, and gives retarded labour.

*Polypus* is easily discovered, and must be removed, as afterwards taught \*.

---

6 DROPSY.

*Abdominal Dropsy* sometimes exists with pregnancy and proportionally gives lingering delivery.

PRACTICE.

After careful enquiry into circumstances, the fluid may be discharged \*.

---

7 DISTENSION.

*Distension* refers to the state of the bladder and rectum; for these organs, when overcharged, occupy more than due space, and proportionally retard delivery.

\* Systematic Elements of Surgery.



PRACTICE.

According to circumstances, distension requires

- 1 Injections,
- 2 Catheterism.

---

8 INFLAMMATION.

*Inflammation* of the parts immediately affected by parturition necessarily makes it more lingering and painful than otherwise it would be.

PRACTICE.

The suitable remedies to remove, or assuage the inflammation, must be diligently employed, as afterwards explained.

---

9 SPASM.

Convulsive *spasmodic* and crampish affections, whether general, or affecting particular parts, proportionally lengthen the time of delivery.

## PRACTICE.

A full enquiry into causes leads to a judicious application of antispasmodics, as mentioned hereafter.

---

## 10 CORPULENCE.

*Corpulence* in a high degree renders the individual unfit for great exertions, and, as a swelling, occupying space, contributes to lengthen out the child-bed process.

---

## 11 HYSTEROCELE.

*Hysterocele*, considered as a cause of lingering birth, is hernia, or rupture, condensing the gravid uterus.

## PRACTICE.

Hysterocele is mentioned as requiring hysterotomy.

---

## 12 DEFORMITY.

*Deformity* of the vagina or os externum, especially as to place or capacity, is a cause of lingering child-bearing.

PRACTICE.

Deformity may require,

1 Dilatation by

The hand,  
The knife.

2 Hysterotomy.

The vagina communicating with the rectum gives the *partus per anum*.

---

13 DEBILITY.

*Debility*, in a high degree approaching to death, necessarily suspends parturition.

CAUSES.

It may be occasioned by

- 1 Flooding,
- 2 Mortification.

PRACTICE.

Delivery may be completed as taught, if practicable.

The death of the mother happening before delivery can be effected, and the child surviving, afford an indication for hysterotomy.



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### ON THE PART OF THE CHILD.

#### 14 SWELLING.

Swelling of any part of the child proportionally impedes the transmission.

The swelling principally alluded to is local dropfy; indeed, no other has been observed to have the effect mentioned.

This disease is,

- 1 Hydrocephalus,
- 2 Ascites.

#### HYDROCEPHALUS.

*Hydrocephalus*, or dropfy of the head, the most common kind is,

- 1 External, or between the scalp and skull;
- 2 Internal, or in the ventricles of the brain \*.

#### SYMPTOMS.

The head is known to be thus affected, by

- 1 Softness,
- 2 Size, ascertained by the cephalometer †.

\* WHYTE on Hydrocephalus.

† STEIN's Opera. This ingenious author calls the instrument labimeter. I have taken the liberty to call it cephalometer, as being expressive of its use.

PRACTICE.

We are, in the first instance, always to presume that the swelling is *external*, and, with the *finger-scalpel*, make an incision cautiously through the scalp only; because, when it is really so, the child will thus be preserved.

If it afterwards appear that the fluid is in the brain, embryotomy is requisite; the embryotomy knife may be employed.

ASCITES.

*Ascites*, or dropfy of the belly, causing delay of delivery, is discovered by the impartion, when the upper parts of the trunk are born.

A perforation is made by means of a proper trocar; perhaps it may be most safely passed within the chest, so as to pierce the diaphragm.

---

15 MEMBRANES.

The *membranes* uncommonly dense tend to protract the labour.

PRACTICE.

This circumstance, easily discovered, is at once obviated by puncturing the most accessible part of them by the *finger-scalpel*.

## 16 CHORD.

The *umbilical chord*, shortened by entanglement or twisting, protracts the time of delivery.

It has this effect only when the head is in the vagina, or born.

## PRACTICE.

While the head is in the vagina, this impediment cannot be removed; but as soon as the head is born, the portion surrounding the neck may be cut asunder, by which the resistance is removed.

## MONSTROSITY.

*Monstrosity* may so increase the volume of the foetus as to render delivery tedious.

This occurrence is discovered by touching.

## PRACTICE.

Extraction by the crotchet, or *obstetricium hamatile*, may be resorted to without much regret.

## PRETERNATURAL PARTURITION.

Parturition is preternatural when any part except the vertex of the child is presented.

This interesting kind of labour may be considered, as to

- 1 Causes,
- 2 Signs,
- 3 Remedy,
- 4 Varieties.



### CAUSES

The preternatural situations would seem to take place at an early period ; their chief causes perhaps are,

- 1 Quantity of the liquor amnii,
- 2 Agitation on the part of the mother,
- 3 Motion of the child.

### SIGNS.

The presence of this labour is discovered by,

- 1 Duration,
- 2 Touching,
- 3 Inspection.

### REMEDY.

The remedy is rectifying the faulty position, so as to render delivery possible, or less difficult. This consists in what is called,

### TURNING.

Turning is the rectification of posture alluded to as a remedy. It is,

- 1 Complete,
- 2 Partial.

### COMPLETE TURNING.

Complete turning is inverting more or less the child's situation, so as to cause the foot or feet

present ; or, in other words, it is rendering the presentation *footling* \*.

This important operation merits full attention as to,

- 1 Attitude,
- 2 Manner
- 3 Impediments.

#### ATTITUDE.

The direction of the axis of the pelvis and uterus, with both which the hand and arm of the operator ought to coincide, points out the proper attitude of the mother. It may be various :

- 1 Supine,
- 2 Lateral,
- 3 Kneeling and resting on the elbows
- 4 Standing and stooping.

The attitude of the operator is regulated by that of the mother.

#### MANNER.

The operator, properly situated, forms his hand, done over with fine oil, &c. as much as may be, into a conical shape ; and in the most delicate manner introduces it into the uterus to such a degree, as enables him to lay hold of one foot, or both, to be drawn into the vagina.

\* PLENCK Elem. Art. Obst. Versio factus est artificiosa manipulatō, qua situs fœtus, pro partu ineptus, ope manus obstetricatoris mutatur, ut fœtus pedibus ex uteri cavo extrahatur. P. 159.

The delivery is completed by drawing gently, in a just direction, imitating the pains and co-operating with them as much as may be; at same time accommodating artfully the situation of the child to the form of the pelvis, in its different points.

### IMPEDIMENTS.

The principal impediments consist in,

- 1 Undilatedness,
- 2 Impaction,
- 3 Searching,
- 4 Delivering.

### UNDILATEDNESS.

Sufficient dilatation is procured by,

- 1 The hand,
- 2 Emollients.

### IMPACTION.

Impaction or inclavation is superseded by performing the operation before all of the liquor amnii has run off, and surmounted by cautious and persevering pressure upwards in a just direction.

### SEARCHING.

The child's feet are most likely to be placed laterally as to the uterus, therefore are most conveniently sought for and intercepted by the hand of the operator, which corresponds to the side of



the mother, to which they are turned, a circumstance readily discovered by touching.

The first may be secured by a *noose* or *lac*, while the other is sought for.

Delivering, although less properly, may be completed by drawing by one foot and leg, till the breech be within reach.

#### DELIVERING.

The footling delivery is always a critical, and too often a fatal event to the child.

Successful extraction very much depends on the head taking the proper turns to enter and pass through the pelvis.

The face ought to be turned towards the mother's side when it enters the brim, and lodged in the cavity of the os sacrum when it is in the pelvis, and approaching to its bottom.

The chin emerges from the distended perinæum by a forward and upward motion like that of the vertex in ordinary parturition.

The face turned to the pubes of the mother is apt to be stopped by the chin catching on the ossa pubis.

This circumstance is obviated by turning the child's trunk in the pelvis about its own axis.

The rigid and undilated condition of the os externum, often creates much and dangerous resistance and delay.

The umbilical chord being compressed, soon produces fatal consequences; the extraction is therefore to be completed with as much expedition as is consistent with safety; by

1 The hand,  
2 Lever, especially the living one, which completely supersedes the *fillets*, *nets*, &c. that have been proposed \*.  
3 The forceps; the living ones are preferable. This resistance is for the most part made by the head,

- 1 Not entering the pelvis,
- 2 Not turning at its bottom,
- 3 Opposed by the os externum.

It may be diminished by extracting the arms, one of which is sometimes wedged betwixt it and the os pubis.

Dexterity is of much more avail than force; the drawing ought to be gentle at first, and increased according to circumstances, and always in a just direction, with full attention to the relative posture and figure of the head and pelvis.

Unfortunately, attempts to extract often kill the child, and sometime separate the trunk from the head remaining in the uterus or vagina; an event which often indicates *excerebration*.

The flexible crotchet may be of excellent use.

#### PARTIAL TURNING.

*Partial turning* is altering the situation of the presenting part, so as to place it more favourably, or substituting an adjacent one in its place, with-

\* BORTON, AMYAND, &c. have exerted their genius in such inventions.

out moving the trunk of the child in any great degree.

This operation, much less dangerous, and often not less practicable than full turning, ought therefore justly to supersede it as often as may be.

Partial turning was the favourite practice of the ancients, and is perhaps too much postponed to the full turning and footling method of the moderns.

### VARIETIES.

The varieties are as the presentations; the principal are of,

- 1 The face,
- 2 The hand,
- 3 The hands,
- 4 The shoulder,
- 5 The foot,
- 6 The feet,
- 7 The breech,
- 8 The chord.

The form of the child, compared with that of the uterine cavity, necessarily prevents the *back* and *belly* from presenting.

---

### THE FACE.

*Face-presentation*, commonly called *Face-case*, is the slightest deviation from ordinary parturition.



## PRACTICE.

This variety is compatible with spontaneous delivery, not however with impunity to the child.

Partial turning, that the vertex may be presented, is clearly indicated.

The living lever is the fittest instrument, because it is manageable in comparatively a small space.

While the lever acts on the occiput, vertex, or front, the fingers support the chin, so as to make it the center of motion to the head.

The case being thus rendered ordinary, no farther instrumentary operation is necessary.

## THE HAND.

During *hand-presentation*, the child's head is necessarily turned to one side of the os internum.

In general, it may be affirmed, that this presentation does not permit unassisted parturition. Indeed it has lately been observed, that a spontaneous *evolution* sometimes happens, so that the breech is presented, and delivery completed.

This event is scarcely to be expected, for the most obvious reasons, and not to be wished, because the children thus expelled have all been dead\*.

\* Dr DENMAN first observed this circumstance, which he calls a spontaneous evolution. Instances of the same kind have been marked by

## PRACTICE.

Delivery may be effected by

- |            |            |
|------------|------------|
| 1 Complete | } turning. |
| 2 Partial  |            |

The latter is to be first attempted, by

- 1 The hand,
- 2 The living lever,
- 3 The impellens\*.

The child's hand may thus be returned, and the vertex presented.

This is a grand and manly attempt; because, if successful, the risks of complete turning are avoided; and although it fail, it is not, when properly conducted, in any great degree injurious.

When partial turning is found to be impracticable, the complete kind becomes indispensable, at least if we wish to save the child.

Dr COGAN of London, Dr HAIR of Lisbon, and Mr. HAY surgeon of Leeds. See London Medical Journal.

An instance of a similar nature occurred last summer in the Edinburgh lying-in hospital. At least, a child presenting the arm was delivered without assistance. The numerous young gentlemen, pupils of the hospital, who were present, all agreed in this circumstance.

When called, I was so engaged with another obstetrical case, that half an hour had elapsed before I arrived at the hospital, and the delivery was over, so that I had not an opportunity to see the mode of the evolution.

\* A small addition to the handle of the lever converts it into an *impellens*, by which the presenting part may be pushed effectually and safely upwards.

### THE HANDS.

Both hands are seldom presented.

#### PRACTICE.

One or both are to be returned, and, if needful, the position of the vertex adjusted by partial turning.

### THE SHOULDER.

*Shoulder-presentation* is only a greater degree of hand-presentation ; in both the head is turned to one of the sides of the pelvis.

#### PRACTICE.

The plan of delivery already mentioned is to be pursued, notwithstanding opposite authority\*.

### THE FOOT.

*Presentation of the foot*, carefully to be distinguished from that of the hand, is capable of spontaneous delivery.

\* PARE Opera Chirurgica, lib. xxiii. cap. 33.

SMELLIE's Midwifery, vol. i. p. 340, &c.

PLANCH Elem. Art. Obst. p. 152.



PRACTICE.

When assistance is indicated, it is easily afforded.

---

THE FEET.

*Presentation of the feet* is an attitude readily in general admitting of even spontaneous delivery.

PRACTICE.

The manner of extracting the footling birth has already been adverted to.

---

THE BREECH.

*Breech-presentation* may be mistaken for the presentation of the head.

PRACTICE.

The impaction attending this presentation is very great, and therefore the transmission succeeding it is promoted by

- 1 The fingers,
- 2 The living lever,

- 3 The living forceps,
- 4 The flexible blunt hook,
- 5 The common blunt hook.

The common blunt hook is a dangerous instrument, always bruising the soft parts, and sometimes fracturing or dislocating the thigh bones; its use ought therefore to be restricted to extraction of the dead child.

Presentations of the feet and breech, on account of their being deliverable by the pains, have been reckoned ordinary and natural.

### THE CHORD.

The umbilical chord falling down before the other parts, especially the head of the child, is subjected to pressure, by which the circulation of the blood is interrupted, and danger produced.

### PRACTICE.

This event does not seem to require the very doubtful practice of full turning, which has been generally recommended.\*

The chord may be pushed beyond the head, and consequently freed from compression, by

\* Dr SMELLIE recommends this conduct, in the most explicit terms, in his Midwifery, vol. 1. p. 351.

- 1 The fingers,
- 2 The living lever\*,
- 3 The hand.

Suppose the hand introduced for the purpose of full turning, is it not in the power of the operator to replace the chord with it?

### THE PLACENTA.

*Placenta-presentation* (*placenta prævia*) takes place when it happens to adhere to the circumference of the os internum.

### SYMPTOMS.

- 1 Softness,
- 2 Hæmorrhage.

### PRACTICE.

The delivery is requisite as soon as may be, to check the hæmorrhage.

The hand is forced beyond the placenta, and the extraction made according to situation of the body, by

\* I have made a groove in the edge of the point of the lever, to retain and carry along the chord with certainty. The instrument thus fitted I call a *reduffor*.



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- 1 The lever,
  - 2 Forceps,
  - 3 Turning.
- 

### COMBINATION.

There is a combination of the lingering and preternatural births.

### PRACTICE.

After full investigation, the case is analyzed, and the faulty circumstances successively corrected by the specified methods.

---

It seems to be in place to make remarks on the

- |               |          |
|---------------|----------|
| 1 Plural      | } birth. |
| 2 Superfoetal |          |
| 3 Dead        |          |
| 4 Forced      |          |
- 

### PLURAL BIRTH.

The *plural birth* (*partus gemellorum*, &c.) may be considered as to

- |             |             |
|-------------|-------------|
| 1 Previous  | } symptoms, |
| 2 Present   |             |
| 3 Practice. |             |

### PREVIOUS SYMPTOMS.

A plural pregnancy somewhat shews itself by

- 1 Unusual size of the abdomen;
- 2 Numerous motions, and in various points at once;
- 3 Anticipation of the common term of delivery.

### PRESENT SYMPTOMS.

The plural birth is distinguished before-completion by

- 1 Smallness of the child,
- 2 Volume of the uterus,
- 3 Touching.

### PRACTICE.

A plurality of children does not occasion much embarrassment at delivery.

Each is delivered as if solitary.

Frequently one presentation is preternatural.

No attempt is to be made to extract any of the placentas till all the children are born, because they sometimes cohere.

If two sets of membranes burst, and the child-

ren be præternaturally situated, a limb of each may be presented at once\*.

This occurrence is easily directed by careful touching.

### SUPERFŒTAL BIRTH.

The superfœtal birth, (*partus superfetatus*), is really a plural one; the chief speciality is the quantity of interval between the expulsions of the children.

### DEAD-BIRTH.

The dead birth, (*partus fœtus mortui*), merits remark, as to,

- 1 Symptoms,
- 2 Effects,
- 3 Practice.

\* Rebecca conceived, and the children struggled within her. And the Lord said unto her, Two nations are in thy womb, and two manner of people shall be separated from thy bowels. And when her days to be delivered were fulfilled, behold there were twins in her womb; and the first came out red all over, like an hairy garment, and they called his name *Eſau*; and after that came his brother out, and his hand took hold on *Eſau's heel*, and his name was called *Jacob*. Genesis, chap. xxv. ver. 22.

And it came to pass in the time of her (*Tamar*) travail, that, behold twins were in her womb. And it came to pass, when she travailed, that the one put out his hand; and the midwife took and bound upon his hand a scarlet thread, saying, This came out first. And it came to pass, as he drew back his hand, that, behold his brother came out; and she said, How hast thou broken forth; this breach be upon thee. And afterwards came out his brother, that had the scarlet thread upon his hand. Chap. xxxviii. ver. 27.



### SYMPTOMS.

The death of the child before delivery may be known by,

- 1 Stilness, or the ceasing of the usual motion,
- 2 Coldness of the uterine region,
- 3 Fœtor,
- 4 No pulsation,
- 5 Softness,
- 6 Separation of the scarf-skin,
- 7 Lividity.

### EFFECTS.

The death of the fœtus, produces,

- 1 Sensation of unusual weight,
- 2 Sickness,
- 3 Parturition.

### PRACTICE.

The dead birth is not more difficult than the living one; but, on the contrary, in some instances, it is more easily completed: Therefore no speciality of practice is indicated.

### [ FORCED BIRTH.

Forced birth is an artificial anticipation of the time of delivery.

The forced delivery may be viewed as to,

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1 Indications,

2 Manner.

### INDICATIONS.

This delivery is necessary when there occur,

1 Excessive uterine hæmorrhage,

2 Epileptic, or convulsive fits of dangerous strength and duration.

### MANNER.

The manner of forcing the delivery is varied by,

1 Dilatation,

2 Presentation.

### DILATATION.

When there is little or no dilatation, it is procured by a gradual pressure and introduction of the hand in a conical form.

### PRESENTATION.

When the vertex is presented, the delivery may be expeditiously effected, by,

1 The lever,

2 The forceps.

When this cannot be performed, recourse must be had to,

3 Full turning.

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**DELIVERY OF THE PLACENTA.**

**INDICATIONS.**

The extraction of the placenta is indicated by,

- 1 Hæmorrhage,
- 2 Detention, (deutera), from various causes,
- 1 Contraction,
- 2 Concretion,
- 3 Debility.

**MANNER.**

This extraction is attempted by gently drawing the umbilical chord in a good direction: Rashness has often produced an inversion of the uterus (inversio).

When the chord is broken, the hand is introduced as for turning :

Attention is necessary, to,

- 1 Distinguish it accurately,
- 2 Disengage it gently,
- 3 Catch it properly,
- 4 Extract it cautiously.



The puerperal pathology extends its views to those diseases which occur during,

- 1 Non-pregnancy,
- 2 Pregnancy,
- 3 Parturition,
- 4 Post-parturition,
- 5 Infancy.

A full consideration of these, so as to enable us to distinguish, prevent, relieve, and remove them, is a subject of the greatest importance.

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#### DISEASES DURING NON-PREGNANCY.

##### 1 Local diseases,

*Deformed Nymphæ,*  
 ——— *Hymen,*  
 ——— *Vagina,*

*Hernia,*  
*Prolapsus uteri,*  
*Polypus,*  
*Cancer,*  
*Dropfy*  
*Tempany;*

##### 2 General diseases,

*Hysteria,*  
*Furor uterinus,*  
*Irregular Menstruation,*  
*Fluor Albus,*  
*Chlorosis.*

## DEFORMED NYMPHÆ.

The nymphæ are sometimes so prominent and pendulous as to give inconvenience.

## CURE.

Excision may be practised.

## DEFORMED HYMEN.

The hymen may be altogether impervious, (hymen imperforatum), or so much contracted as to be productive of considerable inconvenience when puberty approaches.

## CURE.

According to circumstances are necessary, jointly or separately,

- 1 The knife,
- 2 Bougie,
- 3 Sponge-tent.

## DEFORMED VAGINA.

The Vagina is sometimes natively contracted, at other times more or less narrowed by concretion.

It has sometimes opened into the rectum, and above the ossa pubis,

# DROPSY OF THE OVARIUM.

Dropsy of the ovarium is probably at first confined to one of the cells or vesicles †.

## DIAGNOSTIC.

This affection is marked by

- 1 Lateral situation,
- 2 Ascension,
- 3 Altered situation of the uterus.

The degree of enlargement is sometimes very great \*.

## SPECIAL CURE.

The cure is attained by the means recommended against ascites. In both may the tapping be practised from the vagina?

† Systematic Elements of Surgery, p. 16.

\* Mr MARTINEAUX of Norwich communicated the following instance to the Royal Society.

Dropsy of the ovarium began soon after a miscarriage, in a woman twenty-seven years of age. She was tapped in the 1757, and the operation was repeated three or four times every year till 1783, when she died; in all eighty times. The quantity of fluid amounted to 663½ pints.

The left ovarium was changed into an immense pouch.



### DROPSY OF THE UTERUS.

Dropical collection in the cavity of the uterus rarely is met with.

### DIAGNOSTIC.

Uterine dropsy is distinguished by

- 1 Situation,
- 2 Impaired function of the uterus,
- 3 Touching.

It is to be carefully discriminated from pregnancy.

### SPECIAL CURE.

The fluid may be spontaneously or otherwise discharged by the os internum.

---

### TYMPANITES.

Tympanites (tympany) is a swelling or distension caused by air.

### SITUATION.

Tympany may be formed in the

- 1 Intestines,
- 2 Peritonæum,
- 3 Uterus.

The existence of the last is doubtful.

### HYSTERIA.

Hysteria, hysterical affection, or hysterics, is a convulsive state, often resembling epilepsy.

#### DISTINCTIONS

This disease is

- 1 Acute,
- 2 Chronic.



#### ACUTE HYSTERIA.

Acute hysteria is made up of strong and seemingly epileptic convulsions, sudden in attack, and of long duration.

The clonic affection of the muscles is most frequent. Sometimes, however, it is tonic, so that the use of the articulations is suspended, or the body becomes inflexible.

This diversity is chiefly incidental to the young and robust system.

It sometimes appears during parturition \*.

\* See Convulsion.

## SYMPTOMS.

The chief symptoms are,

- 1 Convulsion of the extremities and trunk,  
producing strong wreathings and agitations;
- 2 Inconsciousness,
- 3 Suffocation,
- 4 Vomiting,
- 5 Sighing and sobbing,
- 6 Murmuring of the intestines,
- 7 Retraction of the navel,
- 8 Stricture of the arms.

A concurrence of these is an *hysteric paroxysm*,  
or *fit*.

This is preceded by

- 1 Pain
  - 2 Grumbling
  - 3 Vomiting,
  - 4 Difficult breathing,
  - 5 Excretion of limpid urine.
- } of the belly,

It is succeeded by

- 1 Laughing, crying;
- 2 Delirium;
- 3 Listlessness, or sleepiness.



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These fits happen most commonly about the menstrual periods, and in barren more frequently than breeding women.\*

### REMOTE CAUSES.

The predisponent are

- 1 Youth,
- 2 Vigour,

The occasional or exciting are

- 1 Irritation or stimulus,
- 2 Strong passion or emotion of mind.

### PROXIMATE CAUSE.

The proximate cause is unquestionably a condition of the nerves, giving morbid or high sensibility.

This has been thought to be peculiarly present in the genital system; hence the name of the disease.

### PROGNOSTIC.

Acute hysteria is seldom a deadly affection.

### CURE.

The indications of cure are

\* Dr CULLEN's First Lines, § MDXVI.

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- 1 Removal of causes,
- 2 Alleviation of symptoms.

### FIRST INDICATION.

The removal of exciting causes is obviously necessary.

The passions are to be calmed, and every soothing suggestion offered.

All irritations, as far as may be, are to be obviated.

### SECOND INDICATION.

Alleviation of the convulsion and other symptoms is obtained by remedies :

#### I. General ;

- 1 Bloodletting,
- 2 Purging,
- 3 Tepid bathing,
- 4 Opium.

#### II. Local ;

- 1 Tepid bath,
- 2 Opium,
- 3 Enema.

These remedies, duly administered, equally subvert the predisposition and alleviate the symptoms.

# CHRONIC HYSTERIA.

The chronic hysteria is, upon the whole, milder than the acute sort; the convulsive motions are fainter, but much more protracted.

This diversity is met with in the delicate and asthenic habit, particularly when old.

## SYMPTOMS.

- 1 Convulsion of the intestines (borborygmi), sometimes audible;
- 2 Convulsion of the gullet (globus hystericus);
- 3 Flatulence, belching, &c.
- 4 Acute pain of the head (clavus hystericus);
- 5 Palpitation;
- 6 Yawning;
- 7 Susceptibility of various and opposite passions, hence laughing and crying alternately;
- 8 Costiveness.

## SPECIAL CURE.

The indications are,

- 1 Abstraction of causes,
- 2 Relief of symptoms.

## ABSTRACTION OF CAUSES.

This is diligently to be attended to, as highly consequential.



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It furnishes occasion to much attentive enquiry.

### RELIEF OF SYMPTOMS.

This is chiefly promoted by

1 Stimulants of the diffusible, volatile, or foetid kind, commonly called *antibysterics*; as

*Ardent spirit,*

*Ether,*

*Spiritus volatilis aromaticus,*

*Tinct. fetida,*

*Musk, &c.*

2 Tonics;

*Wine,*

*Iron preparations, steel carraway, &c.*

*Steel waters,*

*Cold bath,*

*Passive exercise,*

*Peruvian bark,*

*Bitter spirituous tinctures.*

3 Diet nutritious, and easily digestible;

4 Laxatives;

*Aloe and aloetics,*

*Soluble tartar,*

*Magnesia, &c.*

5 Opiates occasionally.

The cure of *symptomatic* hysteria requires attention to the original disease.

### FUROR UTERINUS.

Furor uterinus, or nymphomania, is an itching sensation about the os externum.

### SEAT.

The glands of the clitoris and urethra are perhaps the seat of the affection.

### SYMPTOMS.

- 1 Lasciviousness,
- 2 Micturition,
- 3 Convulsive motions.

### PROXIMATE CAUSE.

This perhaps is an alteration, somewhat of the inflammatory kind, of the glands, of the seat of the disease, and of their fluids or secretions.

### CURE

Is effected by

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- 1 Removal of causes,
- 2 Relief of symptoms.

### REMOVAL OF CAUSES.

Every suspected exciting cause is attentively to be removed.

### RELIEF OF SYMPTOMS.

The remedies are,

#### 1 General ;

*Bleeding,*  
*Tepid bath,*  
*Sedatives, opiates.*

#### 2 Topical ;

*Tepid bath, poultice, &c.*  
*Emollients---milk, sweet cream, oil, &c.*  
*Opiates, ol. anodynum\*.*

---

### IRREGULAR MENSTRUATION.

A comprehensive view of this important disease may be taken under the heads,

\* *Sacch. Saturni* has been proposed as a local application.



- 1 Non-appearance,
- 2 Suppression,
- 3 Overflowing.

---

### NON-APPEARANCE.

Non-appearance of the menses (*emansio menses*), is not frequent.

### CAUSES.

- 1 Malformation of the menstrual vessels,
- 2 Obstruction of the os internum or externum,
- 3 Disease producing inanition.

### CURE.

This disease, flowing from the first cause, is, in its nature, incurable; but as this is a circumstance of difficult detection, a prudent application of *emmenagogues* is admissible.

Depending on the second cause, it is obviated by surgical means.

Resulting from the third cause, the removal of the primary affection is the cure.

---

### SUPPRESSION.

Suppression, or stoppage of the menses, may be,

S

- 1 Partial,
- 2 Total.

Both may be considered under the term scantiness or deficiency (amenorrhæa).

#### SYMPTOMS.

- 1 Lassitude and debility,
- 2 Vitiating appetite,
- 3 Paleness, or discolouring of the chlorotic kind,
- 4 Swelling of the feet and legs,
- 5 Pains in the back and loins,
- 6 Hæmorrhage from the nose, lungs, &c.

#### CAUSES.

Deficiency of the menses, is, for the most part a symptomatic affection, or a disease dependent on another; consequently the pre-existing affection is the occasional cause.

This circumstance is exceedingly consequential, and needs the closest attention.

Suppression, proceeding from pregnancy, is obviously not a disease, but may be hurtfully mistaken for one.

#### PROGNOSTIC.

The fate of the patient is regulated by the nature of the primary disease,

CURE.

The re-establishment of the menses has been attempted by substances from their supposed effects, called *Emmenagogues*.

It may be justly questioned, if materia medica contains any articles deserving this character. The following, however, have been deemed to be such:

- 1 Sabina,
- 2 Rubia tinctorum,
- 3 Melampodium,
- 4 Aloe,
- 5 Cantharides. &c.

INDICATIONS.

The general indications of cure, are,

- 1 Removal of causes,
- 2 Relief of symptoms.

REMOVAL OF CAUSES.

This is of the utmost importance to be answered, because the affection in question is almost always symptomatic.

RELIEF OF SYMPTOMS.

As far as the disease is idiopathic, and connected with inanition, the remedies; are,



1 General;

Nutritious diet,  
Wine,  
Air,  
Passive exercise, *riding, friction, &c.*  
Tonics.

*Peruvian bark,*  
*Preparations of steel,*  
*Cold-bath.*

2 Local;

Stimulants,  
*Heat*, through the medium of water  
*Electricity*,  
*Marriage*,  
*Impetus*, from compressing the femoral  
arteries.

The constitution being mended, the menses, when the suppression has been symptomatic, return spontaneously.

In no case ought the practitioner to be too busy, he may do mischief.

The healing power is productive of changes which the undiscerning are apt to ascribe to other causes.

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OVER-FLOWING.

Over-flowing of the menses (menorrhagia), is an excessive discharge within a given time.

This happens when the usual quantities are dis-

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charged, after too short intervals; or when uncommon quantities are effused at the stated terms.

A considerable fluctuation, as to quantity and periods of the menses, is consistent with health.

### CAUSES.

The causes of menorrhagia, are,

- 1 The plethoric state and its causes,
- 2 Stimulants,
- 3 Agitation or exertion,
- 4 Non-contraction.

Menorrhagia is unquestionably an effusion from the menstrual arteries.

When this hæmorrhage is dependent on the plethoric and vigorous state, it is called *active*; occurring in opposite circumstances, it is *passive*.

Menorrhagia is oftenest of the former kind; it soon, however, passes on to the latter.

### PROGNOSTIC.

Menorrhagia, unconnected with local disease, seldom dangerous.

### CURE.

The application of remedies must proceed according to the nature of the hæmorrhage.

The general indications exist,

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- 1 Removal of causes,
- 2 Relief of symptoms.

### REMOVAL OF CAUSES.

This is of the highest importance, and merits the strictest attention.

### RELIEF OF SYMPTOMS.

Active menorrhagia is cured by,

#### 1 General remedies;

*Blood-letting,*  
*Abstinence,*  
*Rest,*  
*Opiates.*

#### 2 Topical ones;

*Tepid-bath,*  
*Opiates.*

Passive menorrhagia is restrained by,

#### 1 General remedies;

*Dietetics,*  
*Stimulants---wine, &c.*  
*Tonics.*



*Peruvian bark,*  
*Vitriolic acid,*  
*Steel preparations,*  
*Cold bath,*  
*Passive exercise.*

2 Local remedies;

Cold bath,  
 Stimulants.

FLUOR ALBUS.

*Fluor albus, or leucorrhœa, is a flux of whitish matter from the vagina\*.*

SOURCE.

It is thought to be an effusion from the menstrual vessels, and to be connected with the passive menorrhagia †.

May it not be a morbid secretion or glandular effusion?

DIAGNOSTIC.

Leucorrhœa is a very common disease.

It may be mistaken for *gonorrhœa virulenta*, or for purulent matter.

\* Elements of Physic and Surgery.

† Dr CULLEN's First Lines, § DCCCCLXXXVIII.

Pain and ardor urinæ attend the former, and inflammation precedes the latter.

Careful touching assists the diagnostic.

### CAUSES.

- 1 Laxity,
- 2 Irritation.

### CURE.

Indications are,

- 1 Removal of causes,
- 2 Relief of symptoms.

The first requires great attention.

The second is answered by,

- 1 General remedies,

Dietetics,  
Stimulants,  
Tonics.

*Peruvian bark, &c.*

- 2 Topical ones;

Astringents,

*Tincture of Peruvian bark,*

\_\_\_\_\_ *oak bark,*

\_\_\_\_\_ *red rose leaves,*

\_\_\_\_\_ *green tea,*

*Red wine,*

*Lime water,*

*Cold water.*

These remedies are injected occasionally into the vagina, while the situation of the patient is favourable to retain them.

An injecting apparatus that gives as little disturbance as possible is to be employed.

The ordinary one answers very well\*.

### CHLOROSIS.

Chlorosis or green-sickness is an asthænic state incidental to the younger subject, and much connected with irregular menstruation.

### SYMPTOMS.

- 1 Non-appearance or scantiness of the menses,
- 2 Sluggishness, lassitude, and debility,
- 3 Dyspepsia,
- 4 Vitiating appetite,
- 5 Paleness verging to the yellow,
- 6 Oedematous state of the feet, &c.
- 7 Headach,
- 8 Pains of the back and loins,
- 9 Palpitation,
- 10 Syncope.

### CURE.

The chlorotic state is cured or obviated by the remedies of passive menorrhagia.

\* Dr SWEDIAUR very obligingly favoured me with the model of a very good one.



## II. DISEASES DURING PREGNANCY.

The diseases occurring most frequently in the pregnant state, are,

- 1 Indigestion,
- 2 Longing,
- 3 Heart-burn,
- 4 Costiveness,
- 5 Hæmorrhoids,
- 6 Varices,
- 7 Strangury,
- 8 Retroversion,
- 9 Cramp,
- 10 Asthma,
- 11 Hepatitis,
- 12 Jaundice,
- 13 Lues venerea,
- 14 Dropsy,
- 15 Abortion,
- 16 False labour.

## INDIGESTION.

Indigestion (dyspepsia) seldom fails to occur early.

## SYMPTOMS.

- 1 Loss of appetite,
- 2 Sickness (nausea),
- 3 Vomiting,
- 4 Flatulence,
- 5 Leanness.

CAUSES.

1 Distention of the uterus which disturbs the digestive organs, as well by sympathy as pressure;

2 Retention of the menses.

CURE.

FIRST INDICATION.

Occasional causes cannot be avoided.

SECOND INDICATION.

Little alleviation can reasonably be expected while the causes continue to act; some, however, may be obtained by,

1 The most digestible food taken frequently, but in small quantity,

2 Free air,

3 Gentle and passive exercise,

3 Cheerful diversions.

---

LONGING.

Longing (pica), or a wish for uncommon foods, is not unfrequent: For the most part transient

CAUSE.

The sympathetic affection of the digestive organs, especially the stomach.

CURE.

The object of the longing may generally be indulged in.

HEART-BURN.

Heart-burn (cardialgia) is a sense of heat and burning about the stomach, often producing sickness and vomiting.

CAUSE.

A sympathetic affection of the stomach, chiefly consisting in,

- 1 Irregular and weakened action,
- 2 Morbid sensibility.

EFFECTS.

- 1 Pain,
- 2 Acidity,
- 3 Indigestion.



CURE.

FIRST INDICATION.

Causes obviously not removeable.

SECOND INDICATION.

Some alleviation is effected by,

- 1 The most nutritious and mild diet,
- 2 Opiates when the pain is severe,
- 3 Absorbents,---*magnesia, chalk, &c.*

---

COSTIVENESS.

Costiveness, (*obstipatio*), is an undue retention of the *fœces alvinæ*.

This is a very common affection, and for the most part is aggravated during the latter months.

CAUSES.

- 1 Uterine pressure,
- 2 Disturbed and weakened intestinal action.

CURE.

FIRST INDICATION.

The causes are fixed.

## SECOND INDICATION.

Alleviation may be had from,

- 1 Laxative diet, ripe fruits, &c.
- 2 Passive or moderate exercise,
- 3 Mildest purgatives,  
*Aloetics,*  
*Neutral salts,*  
*Magnesia.*

It is requisite to repeat these occasionally.

---

HÆMORRHOIDS.

Hæmorrhoids or piles, (hæmorrhoids), is a discharge of blood from veins near the anus.

When this discharge happens from vessels within the anus, the hæmorrhoids are said to be *internal*.

When the veins are turgid and about to burst, they are called *blind piles*, to distinguish this stage from the next, which gives *open* or *bleeding piles*.

The stretching of the vessels, during the blind stage particularly, produces more or less inflammation and pain, which are highly aggravated at stool, particularly if costiveness be present.

This disease appears most commonly in advanced pregnancy.

**CAUSES.**

1 Magnitude and pressure of the uterus, interrupting the return of the blood in the hæmorrhoidal veins ;

2 Costiveness,

3 Parturition.

**CURE.**

**FIRST INDICATION.**

The investigation and removal of exciting causes are to be attended to as much as possible.

**SECOND INDICATION.**

The symptoms are softened, by,

- 1 Leeching, especially during the blind stage.
- 2 Gentle cathartics occasionally administered by the mouth, or in the form of clyster \*.
- 3 Tepid bath, especially poultice;
- 4 Emollients---oil, cream. &c.;
- 5 Opiates---anodyne oil or liniment.

The effect of these remedies is much promoted by the lying posture, when the swelling and pain are considerable.

\* I have contrived a convenient apparatus, by which the patient can administer the injection.



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The disease thus appears in a great measure to be local, and not nearly so consequential as some have supposed.

---

### 6 VARICES.

Varices are swollen or distended veins.

The varicose state of the veins of the legs, frequently occurs towards the end of pregnancy, and is necessarily attended with considerable pain.

#### CAUSE.

The gravid uterus, affecting the motion of the returning blood.

#### CURE.

##### FIRST INDICATION.

The exciting cause cannot be removed till parturition.

##### SECOND INDICATION.

Relief is procured by,

- 1 Horizontal or lying posture,
- 2 Swathing the limbs in the mornings with flannel, so as to give due resistance.

3 Friction in an upward direction, especially before the applying of the swathes.

## 7 STRANGURY.

Strangury (*ischuria vesicalis*, *micturitis*), is a painful or difficult passing or suppression of the urine.

This disease occurs oftenest towards the latter period of pregnancy, and sometimes occasions most uncommon distension and even bursting of the bladder \*.

### CAUSE.

The pressure of the gravid uterus on the neck of the bladder or urethra.

### CURE.

#### FIRST INDICATION.

The pressure of the uterus may be taken off, at least for a time, by the lying or lateral posture.

#### SECOND INDICATION.

Alleviation is obtained, by

- 1 Catheterism occasionally,
  - 2 Puncture of the bladder from the vagina,
- when the catheter cannot be introduced.

\* From Mrs McK—— I extracted at once by the catheter, eleven pints three gills of urine, English measure.

## RETROVERSION.

Retroversion, (*retroversio uteri*), is a falling-back of the uterus, by which its fundus is lodged in the cavity of the os sacrum, and its os internum raised towards the ossa pubis.

This affection occurs about the fourth month, because the fundus uteri, at this time, begins to rise above the brim of the pelvis \*.

## DIAGNOSTIC.

It is of great consequence to obtain an early diagnostic, because duration induces and increases the danger.

The chief symptoms, are,

- 1 Pain, chiefly referable to the uterus,
- 2 Sickness at stomach,
- 3 Hiccup,
- 4 Vomiting,
- 5 Suppression of the urine and fæces,
- 6 Swelling of an oval figure above the ossa pubis (urocele),
- 7 Tenesmus,
- 8 Obstruction of the vagina, &c. perceived by touching,
- 9 Fever.

\* London Medical Transactions,

Systematic Elements of Surgery.



**CAUSES.**

- 1 Violent straining or exertion.
- 2 Distension of the viscera, especially of the bladder.
- 3 Distortion.

**PROGNOSTIC.**

This disease is always dangerous, particularly when it has continued for any considerable length of time.

**CURE.**

**FIRST INDICATION.**

The removal of causes is necessary and a good deal practicable.

The distension of the bladder and rectum urgently require to be obviated by,

- 1 Change of posture of the uterus,
- 2 Catheterism,
- 3 Clysters.

**SECOND INDICATION.**

The symptoms are alleviated, if not entirely removed, by,

- 1 Reduction,
- 2 Retention.

## REDUCTION.

Reducing, or replacing of the uterus is a necessary, but difficult operation.

It is most successfully performed while the patient rests on her knees and elbows.

Two fingers of the left hand are introduced into the vagina, and two of the other into the rectum, to co-operate in such pressure as may be found requisite.

In case this method be fruitless, the living lever may be advantageously applied to the os internum, to move it downwards to diminish the impaction.

An instrument, nearly of the same form, may be employed with more effect than the fingers in the rectum, to co-operate with the lever.

Should these expedients fail to produce reposition, one or other of the following operations must be performed.

I. Diminishing the bulk of the uterus, by discharging the liquor amnii, through

- 1 The os internum, by means of the catheter or similar instruments.

- 2 A perforation or puncture in the most accessible part of the uterus made by a proper trocar.

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### CURE.

The circumstances regulate the use of

- 1 The knife,
- 2 Bougie,
- 3 Sponge-tent.

### HERNIA.

Hernia, or rupture, denotes a displacement of the viscera, covered by the integuments of the surface at which it is formed.

This disease most readily takes place among the abdominal organs, because they are most susceptible of changing place.

The female is liable to,

- 1 Exomphalos, umbilical,
- 2 Bubonocoele, inguinal,
- 3 Miracele, femoral,
- 4 Hysterocele, uterine,

} Hernia.

The third is seldom met with in the male; the fourth is peculiar to the female.

### CURE.

Hernia admits of,

- 1 Radical,
  - 2 Palliative,
- } Cure.



Both these modes indispensibly require,

- 1 Reduction,
- 2 Retention.

The first method peculiarly consists in procuring an impossibility of relapse\*.

It has been already remarked that pregnancy, concurring with hysterocele, rendered hysterotomy necessary†.

### PROLAPSUS.

Prolapsus, procedentia, or downfalling, is a displacement of any organ not covered by the common integuments.

The female is peculiarly liable to,

- 1 Prolapsus uteri,
- 2 ----- vagina.

The former occurs often, and exists in the

- |                |          |
|----------------|----------|
| 1 Non-pregnant | } State. |
| 2 Gravid       |          |

The following remarks apply to it, in the first one.

This affection seldom occurs before child-bearing, and generally in advanced life.

\* Systematic Elements of Surgery.

† Pages 83 and 90.

**DIAGNOSTIC.**

The disease in question can scarcely be mistaken.

It is readily discovered by,

- 1 A perception of obstruction,
- 2 A painful sensation,
- 3 Touching,
- 4 Inspection.

**CAUSES.**

- 1 Relaxation of the ligamenta lata, &c.
- 2 Straining during travail, &c.

**PROGNOSTIC.**

The disease commonly is not dangerous, always, however, abundantly incommoding.

The more recent the affection, and the younger the subject, the removal is less difficult.

**CURE.**

Prolapsus, like hernia, requires,

- 1 Reduction,
- 2 Retention.

**REDUCTION.**

Reduction or replacing of the uterus is easily effected, by gentle pressure in the reclined posture.

## RETENTION.

Retention, or maintaining the replaced uterus in due situation, is difficultly acquired; it is attempted by

- 1 Pessaries,
- 2 Bandage.

## PESSARIES.

Among all the varieties of pessaries, that is preferable which possesses the following qualities:

- 1 Smoothness,
- 2 Lightness,
- 3 Compressibility.

I have invented the *air-pessary*, which has these characters in a greater degree than any other I know of\*.

## BANDAGE.

Bandage cannot afford full retention; it must be admitted, however, that its effect is not a little comfortable and beneficial.

\* The air-pessary is formed of a small bladder or bag, soft and air-tight, with a valve at the orifice. It is introduced and then duly inflated by the patient, by a small and long flexible pipe, which is immediately retired.

This instrument, while it is exceedingly light, fully occupies the vagina, and supports perfectly the uterus. When it is wished to retire it, the valve is forced, and immediately it collapses.



The T bandage is fittest.

A piece of folded linen cloth, occasionally covered with fine oil or butter, and applied over the os externum, supported by the T Bandage, may, at least, be employed when pessaries of proper construction cannot be procured.

While the retention is pursued by these methods, the laxity is attacked by suited remedies: Which are,

1 General.

*Diet,*

*Exercise,*

*Tonics, cold-bath, &c.*

2 Topical.

*Oak,*

*Peruvian,*

*Allum,*

*Cold.*

} barks.

---

POLYPUS.

Polypus is a flesh-like tumour, generally somewhat round.

It is formed in,

1 The nose,

2 The ear,

3 The throat.

4 The vagina.

Polypus in the vagina, is often attached by a peduncle or root to the os internum.

This swelling sometimes acquires great size\*.

#### DIAGNOSTIC.

The diagnostic is easily gathered from the

- 1 Pain,
- 2 Hæmorrhage,
- 3 Suppression of urine and fœces,
- 4 Touching,
- 5 Inspection.

A careful discrimination is requisite betwixt it and prolapsus uteri; a mistake may be fatal.

#### PROGNOSTIC.

This affection, when inveterate, is very susceptible of cancer.

#### CURE.

Extirpation, which ought never to be delayed, is practicable by,

- 1 Excision,
- 2 Ligature.

The former is effected by the knife or scissors properly formed.

\* Elements of Physic and Surgery, vol. ii.

The latter, in the common way, or by the instruments of LEVERET and HUNTER \*.

---

CANCER.

Cancer is an ulcer of the most malignant nature.

PREDISPOSITION.

It is difficult to point out the predisposition to cancer in the constitution in general. In the part affected, it is peculiar induration, named

SCIRRHUS.

Scirrhus is a loss of vascular structure, consistent, however, with a degree of circulation of the fluids.

SYMPTOMS

The symptoms of scirrhus, are,

- 1 Peculiar hardness,
- 2 Glandular situation,
- 3 Slow formation,
- 4 Indolence, or absence of pain.

The transition of scirrhus to the cancerous state is always marked by inflammation, accordingly,

† Elements of Physic and Surgery, vol. ii.



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inflammed scirrhus has been named occult cancer; and when this proceeds to effusion and rupture, it is open cancer.

The symptoms of this last, are,

- 1 Acute pain,
- 2 Ragged margin,
- 3 Foetor,
- 4 Erosion,
- 5 Acrimony.

The acrid quality of the matter of cancer, does not result from any diversity in the inflammation, considered as a state or process, but seemingly from the previous condition of the affected parts.

### PROGNOSTIC.

Cancer is always full of danger, the slightest degree of it is justly alarming.

### CURE.

The cure of cancer, is,

- 1 Radical,
- 2 Palliative.

#### 1 RADICAL CURE.

The radical cure can only be had by amputation, and, in order that this may ensue, it is absolutely necessary that it be,

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1 Timely,

2 Complete.

It may be effected, by,

1 Caustic---*arsenic*, &c.

2 The knife,

3 Ligature.

### 2 PALLIATIVE CURE.

Palliation is acquired by remedies

#### 1 General :

Diet mild and nourishing ;

Tonics---*Peruvian bark*, *wine*, &c. ;

Anodynes---*Opium* :

#### 2 Topical :

Absorbents---*fine lint*, *sponge*, &c. ;

Demulcents---*oil*, *milk*, *mucilage*, &c. ;

Anodynes---*ol. anodyn.* &c.

Left the ulceration may be *venereal*, *mercury* may always be tried.

The fever, keeping pace with the ulcer, finally kills the patient.

The most frequent situations of cancer are,

1 The breast,

2 The uterus.

## CANCER OF THE BREAST.

Cancer of the breast or milk glands is frequent.

It most commonly occurs after the child-bearing period. Indeed it is not confined to the puerperal female.

## SPECIAL CURE.

Extirpation during the scirrhus state is the most certain plan of cure.

## CANCER OF THE UTERUS.

Uterine cancer oftenest attacks the aged female.

## SYMPTOMS.

- 1 Pain about the hypogastric region and pubes;
- 2 Discharge peculiarly acrid and foetid;
- 3 Volume;
- 4 Induration;
- 5 Extent;
- 6 State of the bladder;
- 7 ----- rectum.

## SPECIAL CURE.

Amputation of the uterus being seemingly impracticable, the palliative plan of cure alone remains.



DROPSY.

Dropsey (Hydrops) is a collection of a serous or water-like fluid in any of the cavities.

The varieties of this disease, more immediately connected with our subject, are seated in the

- 1 Abdomen,
- 2 Ovarium,
- 3 Uterus.

DROPSY OF THE ABDOMEN.

The abdominal dropsey (ascites) is formed in the cavity of the peritonæum.

DIAGNOSTIC.

Ascites is known by

- 1 Progress,
- 2 Uniformity,
- 3 Fluctuation.

CAUSES.

Ascites may immediately arise from

- |  |   |                    |
|--|---|--------------------|
| <ol style="list-style-type: none"><li>1 Laxity</li><li>2 Obstruction</li><li>3 Rupture</li><li>4 Scirrhusity</li></ol> | } | of the absorbents. |
|--|---|--------------------|

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Ascites is carefully to be distinguished from pregnancy, with which it sometimes is present.

### PROGNOSTIC.

The fate of the ascitical patient is often dangerous, always doubtful: the younger the sequel is less to be dreaded.

### CURE.

Ascites is removed by

1 Absorption,

2 Tapping\*.

The first is frequently unattainable, and not to be too long prosecuted by

1 Cathartics---*Crem. Tart. &c.*

2 Diuretics,

3 Stimulants---*exercise, &c.*†

\* Systematic Elements of Surgery.

† A woman, aged 40, in the parish of Kirklington, near Carlisle, laboured under ascites for three years. The size of her belly was very great, while her body was much emaciated.

At last her navel, which was much protruded, burst, and the fluid was suddenly discharged.

The wound continued open, and afforded an oozing, for three or four months. She gradually recovered her health, and has had no relapse.

These measures approach much to the nature of embryotomy.

## II. Pelvitomy.

It is surprising that Dr HUNTER had not adverted to the propriety of this measure suggested by Dr PURCEL\*, because he found that the uterus could not, after death, be otherwise extracted from the pelvis†.

If timeously performed, it may save both mother and child.

## RETENTION.

After the uterus has been replaced, it is easily kept in its situation.

The more difficult the reduction, the more easily is the retention effected.

Reduction is favoured by

- 1 Rest,
- 2 Lying posture,

---

## 9 CRAMP.

Cramp is a partial spasmodic or convulsive affection.

\* Medical Commentaries.

† Mr WILMER's Cases, in which an instance of this affection, fatally mistaken, is narrated.



This most frequently attacks the muscles of the legs in advanced pregnancy.

CAUSES.

- 1 Idiosyncrasy, giving high sensibility.
- 2 Irritation, resulting from the gravid condition.

CURE.

FIRST INDICATION.

The action of the exciting cause may be somewhat suspended by

Change of posture.

SECOND INDICATION.

Relief is obtainable by

- 1 Friction, or motion,
- 2 Tepid bath,
- 3 Opiates.

10 ASTHMA.

Asthma is breathlessness, or confined respiration.

CAUSE.

The elevation of the diaphragm, or rather, perhaps, its being prevented by the volume of the uterus from descending.

CURE.

Alleviation may be derived, especially when the patient is plethoric, from  
Evacuants.

HEPATITIS.

Hepatitis is inflammation of the liver.  
It seldom occurs.

SYMPTOMS.

- 1 Pain in the region of the liver, sometimes shooting to the shoulder.
- 2 Vomiting caused by the proximity of the stomach,
- 3 Hardness,
- 4 Fever.

CURE.

The remedies are those of inflammation, to be enumerated hereafter.

JAUNDICE.

Jaundice (icterus), is an obstruction of the bile.  
This disease is seldom connected with pregnancy.

SYMPTOMS.

- 1 Yellowness of the surface,
- 2 ----- of the urine,
- 3 Whiteness of the fæces alvinæ,
- 4 Costiveness,
- 5 Listlessness.

CURE.

Jaundice generally yields to

- 1 Diet of a digestive and laxative quality,
- 2 Soap,
- 3 Soluble tartar,
- 4 Gentle exercise.

No management incompatible with the gravid condition is to be adopted.

---

13 LUES VENEREA.

Lues Venerea, or venereal disease, is excited by a peculiar subtle poisonous matter, communicated generally during the sexual commerce.

Its forms are,

- 1 Gonorrhœa virulenta,
- 2 Syphilis,



GONORRHÆA VIRULENTA.

Gonorrhæa virulenta is the venereal disease confined to the vagina and external parts.

SYMPTOMS.

- 1 Running, or a flux of matter, often resembling pus,
- 2 Pain,
- 3 Micturition;
- 4 Tenesmus.

SOURCE.

The glands on the affected surface.

CAUSE.

The venereal poison distressing the glands, &c.

CURE.

FIRST INDICATION.

The poison cannot be directly removed; indeed it has acted before it be discovered.

SECOND INDICATION.

The symptoms are relieved or removed by topical applications,

- |                |               |
|----------------|---------------|
| 1 Mucilaginous | } injections. |
| 2 Oily         |               |
| 3 Mercurial    |               |
| 4 Anodyne      |               |

This degree of the disease often disappears spontaneously.

### SYPHILIS.

Syphilis is the effect of the venereal poison become more or less general, giving

- 1 Ulcers (chancres);
- 2 Bubos, or inflammation and suppuration of the lymphatic glands;
- 3 Ulcers of the almonds of the ears, &c.
- 4 Copper-coloured and often scaly and crusty spots over the body.
- 5 Caries.

### CURE.

#### FIRST INDICATION.

The poison, the cause of all the symptoms, is either destroyed, or its action eluded, by

- 1 Mercury; the mildest and most effectual preparations are,

*Pilul. Mercurial. P. E.*

*Ung. Mercurial. P. E.*

- 2 Opium.

SECOND INDICATION.

The first indication, properly fulfilled, supercedes the second.

The remedies ought perhaps only to be urged to alleviate the symptoms till after delivery, when the cure is to be completed.

14 DROPSY.

Dropfy is a morbid collection of the serous or water-like part of the blood in the cells of the fatty membrane, or in a cavity.

The former situation gives to the affection the name of *anasarca*, or *œdema*, to which the following remarks refer :

œdema often appears on the feet, legs, and even the os externum, during advanced pregnancy, to a very considerable degree.

SYMPTOMS of œDEMA.

- 1 Swelling,
- 2 Pasty quality,
- 3 Uniformity,
- 4 Progress.



## CAUSES.

1 General affection of the exhalants and absorbents.

2 Compression on or obstruction of the absorbents, arising from the gravid uterus,

## CURE.

## FIRST INDICATION.

This cannot be answered till parturition.

## SECOND INDICATION.

The symptoms are moderated by,

- 1 Recumbent posture,
- 2 Friction,
- 3 Bandage.

## ABORTION.

Abortion (abortus), or miscarriage, is a premature expulsion of the foetus.

Abortion may take place at any period of pregnancy. It however most frequently occurs

in the early one, or about the third and fourth months.

SYMPTOMS.

- 1 Pain about the loins and os sacrum ;
- 2 Tenesmus, or downward pressure ;
- 3 Hæmorrhage, or flooding ;
- 4 Sickness, especially after motion ;
- 5 Fever.

These become aggravated in proportion to the aborting tendency.

CAUSES.

I. Predisponent ;

- 1 Plethoric state,
- 2 Irregular menstruation,

II. Occasional ;

*On the Part of the Mother,*

- 1 Stimulant food or drink,
- 2 Exertion,
- 3 Agitation,
- 4 Disease—fever, lues venerea, &c.
- 5 Passion or emotion of mind.

*On the Part of the Child,*

- 1 Disease,
- 2 Death.

III. Proximate ;

- 1 Separation of the placenta or chorion,
- 2 Death, or disease of these parts.

PROGNOSTIC.

When the symptoms are intense, especially the flooding, abortion is scarcely to be prevented.

The danger principally flows from the hæmorrhage, which bears a proportion to the dilatation of the vessels of the uterus, which is as the progress of pregnancy ; therefore, the later the more dangerous.

CURE,

FIRST INDICATION.

This demands special attention,

SECOND INDICATION.

The flooding and other symptoms are alleviated, and an opportunity afforded for the removal of the proximate cause, by,



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- 1 Early and plentiful blood-letting,
- 2 Rest in the recumbent posture,
- 3 Mild laxative injections, to prevent costiveness,
- 4 Coolness,
- 5 Opiates.

If these remedies are incapable to prevent abortion, it may then be permitted, or, when the flooding is violent, promoted by.

- 1 The hand,
- 2 Instruments—placenta-forceps, &c.

Manual assistance is almost inadmissible previous to the third or fourth months.

---

### FALSE LABOUR.

False labour (*partus spurius*) is generally erratic pains of the nature of colic.

#### CAUSES.

- 1 Costiveness,
- 2 Pressure on the intestines,

#### CURE.

#### FIRST INDICATION.

Costiveness is obviated by,

Laxatives administered by the mouth and anus.

### SECOND INDICATION.

The pain is allayed by,

- 1 Opiates occasionally.

### III. DISEASES DURING PARTURITION.

- 1 Convulsion,
- 2 Flooding,
- 3 Laceration of the { Uterus,  
Bladder,  
Perinæum,
- 4 Luxation of the ossa pubis.

### CONVULSION.

Convulsion is involuntary muscular action.

Puerperal convulsion seems to be of the epileptic kind.

It for the most part takes place after the labour is considerably advanced.

The fits are frequent and very violent, and the mother is unconscious, even during their intervals.

**CAUSES.**

Convulsion evidently arises often from irritation.

The puerperal kind depends on, and is influenced by,

- 1 Idiosyncrasy, giving peculiar sensibility,
- 2 Distension of the os internum.

**PROGNOSTIC.**

Violent convulsive action, especially during parturition, cannot exist without danger.

**CURE.**

**FIRST INDICATION.**

This deserves much attention, and therefore delivery is to be promoted, as circumstances may require, by,

- 1 The hand,
- 2 The lever,
- 3 The forceps,
- 4 Turning.

**SECOND INDICATION.**

This is answered by,



- 1 Blood-letting,
- 2 Tepid bath,
- 3 Mild injections,
- 4 Opiates.

When the delivery is completed, the disease, for the most part, suddenly disappears.

### FLOODING.

Flooding is uterine hæmorrhage.

#### SOURCE.

The dilated extreme arteries of the uterus chiefly,

#### CAUSE.

A separation more or less extensive of the placenta from the uterus.

This necessarily happens when the placenta adheres to the circumference of the os internum, (placenta prævia).

It thus appears, that flooding is of the nature of the discharge connected with abortion.

#### PROGNOSTIC.

Flooding is always dangerous, and often produces, very suddenly, fatal consequences.

CURE.

FIRST INDICATION.

The exciting causes cannot in general be obviated.

SECOND INDICATION.

This alarming event can only be checked by the contraction of the uterus permitting that of the bleeding vessels, consequently delivery is to be effected as expeditiously as possible.

It is fortunate when the dilatation permits proper assistance easily.

The means enumerated under convulsion are to be employed.

When the dilatation is small, the flooding excessive, and no pains, the delivery must be completed by adequate force.

Mean time, all exertion on the part of the patient is to be avoided as much as may be.

---

LACERATION OF THE UTERUS.

Laceration or bursting of the uterus, a most disastrous event, is happily a rare one.

The manner and degree of it is various\*.

\* It is alledged that the uterus has been torn from the vagina, (*uteri Segmentum inferius a vagina avulsum*), by the hand introduced for turning being pushed too violently upwards.

PLENCK, Elem. Art. Obst. p. 129.

## SYMPTOMS.

- 1 The sudden ceasing of the pains,
- 2 Alteration externally and internally,
- 3 Flooding,
- 4 Noise or crack,
- 5 Sinking pulse,
- 6 Cold extremities,
- 7 Fainting.

## CAUSES.

- 1 Original delicacy,
- 2 General distention,
- 3 Partial pressure.

## PROGNOSTIC.

This disease is always highly dangerous, and often fatal.

## CURE.

## FIRST INDICATION.

This is answered by delivery, to be effected as taught.

A partial projection of the child permits of delivery.

After the child has fallen through the laceration into the abdomen, the uterus has been healed, and the fetus discharged by abscess, &c.

Sometimes it has become petrified, (lithopædia), and produced what is called *perennial gestation*.—*Histoire de la Société Royale de Médecine*; année 1776, p. 308.



An entire escape of the child into the abdominal cavity, renders hysterotomy necessary.

**SECOND INDICATION**

After delivery, the hæmorrhage, &c. are abated, and the healing permitted, by,

- 1 Anodynes,
- 2 Cold,
- 3 Rest.

---

**LACERATION OF THE BLADDER.**

Laceration or bursting of the bladder does not often happen.

**CAUSES.**

- 1 Distension,
- 2 Instruments---forceps, &c.

**CURE.**

**FIRST INDICATION.**

Attention to occasional causes is much unavailing.

**SECOND INDICATION.**

The healing is promoted by,

- 1 The catheter,
- 2 Suture.

### LACERATION OF THE PERINEUM.

Laceration or wound of the perineum is an obvious affection.

#### CAUSE.

Distension from,

- 1 The child,
- 2 Instruments.

#### CURE.

##### FIRST INDICATION.

This may be adverted to, so as to moderate the degree.

##### SECOND INDICATION.

The healing or concretion is favoured by,

- 1 Soft dressing,
- 2 Ecceprotics,
- 3 Laxative injections.

Suture is never admissible.

IV. DISEASES DURING POST-PARTURITION.

Diseases which occur during post-parturition, or within a month after delivery, are,

- 1 Inversio uteri,
- 2 Lochiorrhœa,
- 3 Ischuria,
- 4 Hysteritis,
- 5 Peritonitis,
- 6 Cystitis,
- 7 Mastodynia,
- 8 Rhagas papillæ,
- 9 Puerperal fever,
- 10 Weed,
- 11 Milk-fever,
- 12 Incontinence of urine,
- 13 Mania,
- 14 Hemiplegia.

---

1 INVERSIO UTERI.

Inversio uteri, or inversion of the womb, is really a prolapsus.

This affection happens immediately after delivery, and before the uterus has contracted itself.

PROGNOSTIC.

Inversion cannot be mistaken for any other affection of the uterus.



## CAUSES.

- 1 Drawing by the chord or placenta,
- 2 Atonic condition.

## CURE.

## FIRST INDICATION.

The causes to be obviated as much as possible

## SECOND INDICATION.

The cure requires,

- 1 Reposition, immediately effected by pressure in a just direction, which restores the proper cavity while the os externum is kept dilated \* ;
- 2 Retention ; this results from the contraction.

---

 LOCHIORRHOEA.

Lochiorrhœa is an excessive discharge of blood after delivery.

This hæmorrhage is essentially of the passive kind.

\* By observing these rules, I reduced an inverted uterus, after the attempts of Dr. DAVID SEANER had been fruitless. The loss of blood had already been so great that the patient soon died.

**SYMPTOMS.**

The same with those of flooding.

**CAUSE.**

- 1 Atonic condition.
- 2 Wound.

**PROGNOSTIC.**

Lochiorrhœa is dangerous according to quantity, which is easily ascertained.

**CURE.**

**FIRST INDICATION.**

This requires all possible attention.

**SECOND INDICATION.**

Relief is attainable, by

- 1 Stillness,
- 2 Anodynes,
- 3 Cold \*,
- 4 Pressure on the hypogastrium,
- 5 Plugging up the os externum.

\* Cold water, and even ice, have been introduced into the vagina and uterus, with advantage. Dr. LEAR: diseases of women.

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The effect of saturnine applications is doubtful.

### ISCHURIA VESICALIS.

Ischuria vesicalis is a suppression of the discharge of urine.

#### SYMPTOMS.

- 1 Pain about the pubis,
- 2 Distension of the bladder (urocele),
- 3 Non-excretion.

#### CAUSES.

- 1 Inflammation,
- 2 Contusion,
- 3 Atony.

#### PROGNOSTIC.

Ischuria vesicalis in general is not a mortal accident, unless the bladder be much destroyed or ruptured.

#### CURE.

##### FIRST INDICATION.

The fulfillment of this must be founded on a



careful enquiry into the particular occasional cause.

## SECOND INDICATION.

The distress is relieved by,

- 1 The catheter occasionally,
- 2 Puncture.

## HYSTERITIS.

Hysteritis is inflammation of the uterus.

Inflammation in every place, being essentially the same disease, and requiring the same means of cure, it is therefore proper to consider it in a general way, before we advert to specialities from situation, &c.

Inflammation is induced frequently, during the puerperal state.

## SYMPTOMS.

- 1 Throbbing or pulsatory pain,
- 2 Redness,
- 3 Swelling,
- 4 Heat,
- 5 Fever.

## CAUSES.

- I Predisponent---plethoric, and vigorous habit,
- II Occasional---these are,

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1 Mechanical, or those that act by impulse, form, size, &c.

2 Chemical, or such as operate by internal decompounding qualities.

### III Proximate---inflammatory derangement.

#### PROGRESS.

About the third day after the action of the occasional causes, (the mechanical are the most common), the inflammation manifests itself by its symptoms, succeeding one another nearly in the specified order.

The local affection always precedes the fever.

The inflammation thus constituted, according to circumstances, takes one of the following

#### TERMINATIONS.

1 Discussion or early disappearance, leaving the parts it had occupied seemingly unchanged as to form or function.

2 Suppuration, or the production of pus or purulent matter, commonly constituting an abscess or boil.

3 Mortification or the death of the affected parts, sometimes called sphacelus or sphacelation.

The mortifying tendency is named gangrene.

#### PROGNOSTIC.

Discussion is plainly the most favourable termination, and next to it suppuration.

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The results of inflammation are, as,

- 1 The quantity,
- 2 The rapidity.

These bear a proportion to their causes.

Besides these leading circumstances, the prognostic must also regard the situation.

### CURE.

#### FIRST INDICATION.

The occasional causes are as far as possible to be checked and removed.

#### SECOND INDICATION.

The symptoms are alleviated by antiphlogistics, viz.

##### I General;

- 1 Blood-letting,
- 2 Cathartics,
- 3 Spare diet,
- 4 Dilution,
- 5 Opiates,
- 6 Tepid bath,
- 7 Coolness.
- 8 Stillness.



II Topical;

- 1 Leeching, &c.
- 2 Poulrice, fomentation, &c.
- 3 Sedatives---*ol. anodyn.* &c.

These remedies ought obviously to be regulated by,

- 1 Habit of the patient,
- 2 Degree,
- 3 Situation, } of the disease.

Discussion is always to be aimed at, and for this purpose the antiphlogistics ought to be applied early.

Inflammation of the uterus does not occur so often as might be expected.

SYMPTOMS.

- 1 Pain in the hypogastrium,
- 2 Hardness,
- 3 Tumour,
- 4 Heat,
- 5 Stoppage of the lochia,
- 6 Fever commencing with shivering.

CURE.

Discussion is always to be anxiously attempted. To the affection may be applied,

- 1 The tepid bath,
- 2 Opiates.

It is a great misfortune when suppuration ensues, because, independently of its bringing on ulcer of difficult cure, the organ is likely to be disqualified for impregnation.

Mortification of the uterus and survival, seem to be incompatible.

### PERITONITIS.

Peritonitis is inflammation of the peritonæum, and more or less of the parts it invests.

When it affects the intestinal peritonæum it may be regarded as enteritis.

This inflammation occurs often.

### SYMPTOMS.

- 1 Pain, encreased by pressure and motion.
- 2 Swelling,
- 3 Hardness, } of the belly,
- 4 Fever, preceded by shivering, &c.

### CURE.

The tepid bath may be used externally and internally.

When the intestinal peritonæum is affected, purging is a doubtful practice.

Anodynes have excellent effects: They may be given *per anum* in mucilage or milk,

There is much reason to believe that this inflammation has often been mistaken for and treated as puerperal fever, afterwards considered.

### CYSTITIS.

Cystitis is inflammation of the bladder.

### SYMPTOMS.

- 1 Pain about the pubis,
- 2 Micturition, or dysuria,
- 3 Tenesmus.

### CAUSES.

- 1 Pressure by the head, or other part of the child;
- 2 Instruments undextrously employed.

### CURE.

The affected organ is favourably circumstanced to admit of the injection of

- 1 Tepid water,
- 2 ----- milk,



3 Tepid mucilage,

4 ----- oil,

5 Anodynes.

---

### MASTODYNIA.

Mastodynia is inflammation or boiling of the mammary glands or breast.

This affection is very frequent and distressing, and has a strong tendency to suppuration.

### CAUSE.

Imperfect excretion of the milk.

### CURE.

The earliest and fullest use of antiphlogistics is necessary to procure discission.

Suppuration destroys a large share or the whole of the milk glands.

As soon as pus is discovered, it is to be discharged by a proper incision, in order to limit its production and effect.

---

### RHAGAS PAPILLÆ.

Rhagas papillæ, or chapped nipple, is frequent, and often interrupts nursing.

A a

CAUSE.

Irritation of sucking and moisture frequently applied.

A degree of inflammation is excited.

CURE.

FIRST INDICATION.

The cause to be avoided as much as possible.

SECOND INDICATION.

Healing is favoured by,

- 1 Anodyne poultice,
- 2 Fine lint,
- 3 Wax liniment,
- 4 Cover, or hood.

This last is at least a useful protecting application.

---

PUERPERAL FEVER.

A general view of fever may be taken, as introductory to the consideration of the puerperal kind of it.

DEFINITION.

Fever is a lesion of all the organs and functions.

SYMPTOMS.

Irregularities of

- 1 Strength,
- 2 Circulation,
- 3 Temperature,
- 4 Respiration,
- 5 Sensibility,
- 6 Reasoning,
- 7 Sleeping,
- 8 Secreting,
- 9 Excreting.

The commencement is very constantly marked by trembling, shivering, or a sense of coldness (horror and rigor).

KINDS.

Fever is,

- 1 Idiopathic,
- 2 Symptomatic.

Idiopathic fever is,

- 1 Continued,
- 2 Intermittent,
- 3 Remittent.



These distinctions are important, because they affect the method of cure.

The following remarks refer to idiopathic continued fever.

#### REMOTE CAUSES.

- 1 Febrile poison,
- 2 Heat,
- 3 Cold,
- 4 Moisture,
- 5 Passion.

The first is most powerful and frequent.

#### MODIFICATIONS.

The principal modifications, complexions, or tendencies of fever are,

- 1 Inflammatory,
- 2 Typhus,
- 3 Putrid.

These result chiefly from the habit,

Inflammatory fever appears in the sanguine subject, and the symptoms are strongly marked.

Typhus, commonly called *nervous fever*, has the symptoms in general more moderate than those of inflammatory fever, but its duration is longer.

Putrid fever upon the whole resembles typhus. It is in fact nervous fever of a bad kind, or having the putrescent tendency.

The state that may be called *putridity* seems to be incompatible with life.

The symptoms of the putrescent condition are,

- 1 Fœtor, like that of putrid substances,
- 2 Blackness of the mouth,
- 3 Loose blood,
- 4 Passive hæmorrhage,
- 5 Petechial spots and vibices,
- 6 Great weakness.

Perhaps fever seldom or never from the beginning is putrescent.

This condition seems often to be the creature of the febrile course.

It may be connected with the inflammatory as well as the nervous kind.

#### PROXIMATE CAUSE.

An alteration of the animal structure or compound, produced by the remote causes,

#### CURE.

#### FIRST INDICATION.

The removal of exciting causes at least is clearly proper, and is partly effected by,

- 1 Ventilation,
- 2 Bathing,
- 3 Cleanliness,

### SECOND INDICATION.

The inflammatory condition is moderated by,

- 1 Blood-letting,
- 2 Cathartics,
- 3 Spare diet,
- 4 Coolness,
- 5 Diluents,
- 6 Tepid bath.

The putrescent tendency is counteracted by,

- 1 Dietetics,
- 2 Wine\*,
- 3 Acids†,
- 4 Peruvian bark,

\* *Koumiss*, a vinous liquor prepared by the Tartars from mares milk, is likely to prove very salutary during the putrid tendency. A dissertation on this singular production, by Dr GRIEVE, physician in Moscow, is given in to the Royal Society of this city.

† Dr GRIEVE informed me, that he prescribed a very liberal use of vinegar, during a putrid fever, which prevailed upon the borders of Russia, with the greatest advantage. The mode was, drenching cloths in it, and applying them very generally to the surface. He imputed his success chiefly to the coolness arising from its temperature, in the first instance, and from its evaporation afterwards.



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- 5 Diluents,
- 6 Laxatives,
- 7 Sedatives.

Food is the most powerful antiseptic.

When fever is purely typhus, shewing neither the inflammatory nor putrid symptoms, a middle course as to the cure may be steered.

It seems to be ascertained, that the usual career of continued fever is not easily shortened; therefore regulating, moderating, and circumscribing the tendencies and symptoms, is perhaps the utmost that the physician can effect, or should attempt.

Puerperal fever generally invades within two or three days after delivery.

Some authors have regarded it as always inflammatory, others as putrescent.

Histories and dissections shew, that it sometimes is the one, and sometimes the other.

The duration is various, often extending to ten, twelve, or sixteen days.

For the most part, there is pain and evident affection of the abdominal parts. On this account, it is probable, that fever symptomatic of peritonitis, &c. has often been considered as idiopathic.

It is not likely that, in any instance, it has been epidemic.

## CURE.

It is evident, that the remedies must be governed by the tendency, as taught.

---

## WEED.

The weed, or ephemera, is a fever or feverish state of short duration, often disappearing within the space of one or two days.

Its invasion is always marked by shivering. It often seems to be symptomatic.

## CURE.

The remedies are to be suited to its

- 1 Tendency,
  - 2 Degree.
- 

## MILK-FEVER.

Milk-fever, or febris lactea, appears about the third day after delivery.

## CAUSE.

The alteration of the milk-glands, in consequence of the preceding secretion.

This disease may safely be considered in general as symptomatic, or at least verging to the inflammatory state. Indeed mastodynia is sometimes produced.

**CURE.**

**FIRST INDICATION.**

This is partly answered by carefully sucking or drawing off the milk, distending and irritating the excretory ducts.

**SECOND INDICATION.**

The symptoms are softened by

Antiphlogistics generally and locally applied.

---

**INCONTINENCE OF URINE.**

Incontinence of urine is a very incommoding accident.

**CAUSE.**

Injury of the bladder and its sphincter, inflicted by,

- 1 The child,
- 2 Instruments.



**PROGNOSTIC.**

The injury is repaired gradually by the healing power, and the function of the bladder for the most part restored.

**CURE.**

**FIRST INDICATION.**

This has obviously no place.

**SECOND INDICATION.**

Alleviation is obtained, by,

- 1 Tonics locally,
  - 2 Jugum.
- 

**MANIA.**

Mania, insanity or madness, occurs now and then after parturition, and seems connected with it.

**CAUSES.**

It is difficult to point them out.  
May its production be referred to,

- 1 Changes in the system of the vena portarum ;

- 2 Matter absorbed from the uterus ;
- 3 A lesion of the sensorium, from the violent exertion during parturition.

It may be symptomatic of inflammation.

CURE.

FIRST INDICATION.

Causes to be investigated and obviated.

SECOND INDICATION.

According to habit, &c. relief may be gained by,

Antiphlogistics applied in due degree.

Soluble tartar has been recommended as an alterative and laxative, peculiarly useful.

---

HEMIPLEGIA.

Hemiplegia is of the nature of apoplexy.

It is unfrequent.

Palsy of one side is present.

CURE.

Antiphlogistics in the beginning at least may be useful.

V. DISEASES DURING INFANCY.

The principal infantile diseases are,

- 1 Stillness.
- 2 Fracture,
- 3 Laxation,
- 4 Contusion,
- 5 Ecchymosis,
- 6 Harelip,
- 7 Cleft-palate
- 8 Tongue-tying
- 9 Imperforated anus,
- 10 \_\_\_\_\_ urethra,
- 11 \_\_\_\_\_ nose,
- 12 Thrush,
- 13 Jaundice,
- 14 Rash,
- 15 Fever,
- 16 Rose,
- 17 Purging,
- 18 Colic,
- 19 Rupture,
- 20 Syphilis,
- 21 Weaning-brash,
- 22 Atrophia,
- 23 Hydrocephalus,
- 24 Dentition.

STILLNESS.

Stillness, or asphyxia, is a temporary suppression of the functions, or a partial and seeming privation of life.



DIAGNOSTIC SIGNS

Stillness, otherwise self-evident, may be mistaken for death, which often happens a little before or during parturition.

Previous death is generally marked by,

- |                |                        |
|----------------|------------------------|
| 1 Fætor        | } of the liquor amnii, |
| 2 Discolouring |                        |
| 3 Lividity,    |                        |
| 4 Flabbiness,  |                        |
| 5 Excoriation. |                        |

EXCITING CAUSES.

- 1 Compression of the head,
- 2 \_\_\_\_\_ chord,
- 3 Racking of the trunk,
- 4 \_\_\_\_\_ neck.

PROXIMATE CAUSE.

A lesion of organization.

DISTINCTIONS.

According to the causes which have acted, asphyxia is,

- 1 Apoplectic,
- 2 Mephitic,
- 3 Vulnerary,

**APOPLECTIC ASPHYXIA.**

Asphyxia is apoplectic when induced by compression on the head.

**CURE.**

**FIRST INDICATION.**

Deformity of the head may be rectified by gentle pressure.

**SECOND INDICATION.**

Relief is attainable by

- 1 Bleeding from the chord or jugular veins,
- 2 Tepid bath.

---

**MEPHITIC ASPHYXIA.**

Mephitic asphyxia is caused by obstruction of the umbilical chord.

**CURE.**

**FIRST INDICATION.**

The compression is to be removed as soon as possible.

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### SECOND INDICATION.

Alleviation is procured by

I. Promoting respiration by inflating the lungs with pure air, while the head and neck are in an unconstrained and exposed attitude \*.

II Supporting the vital temperature by,

- 1 Warm flannel,
- 2 Tepid bath,
- 3 Warm injection into the stomach, &c.

III Stimulants,

- 1 Heat,
- 2 Æther,
- 3 Spirit.

---

### VULNERARY ASPHYXIA.

Vulnerary asphyxia, is brought on by racking or undue drawing.

#### CURE.

#### FIRST INDICATION.

As little force as possible to be employed in the delivery.

\* I have invented an apparatus for throwing pure air immediately into the lungs. It is simple and convenient. It serves likewise to inject tepid water, &c. into the stomach and rectum.



## SECOND INDICATION.

Relief may be expected from,

- 1 Blood-letting, especially if any distention or rupture of the vessels be evident or suspected;
- 2 Relaxed posture;
- 3 Emollients, poultice, &c.

To procure revival of the still-born child, is an important business in the eye of philanthropy, which will not be stinted in its efforts and perseverance.

Success gratifies the finest feelings of the human breast.

## 2 FRACTURE.

Fracture of the bones of the limbs is induced by violence during delivery.

## CURE.

The cure demands,

- 1 Reposition,
- 2 Retention.

## 3 LAXATION.

Laxation, or dislocation of the bones of the limbs, like fracture, is the effect of violent delivery.

## PUERPERAL PATHOLOGY. 101

### CURE.

The cure requires,

- 1 Reduction,
- 2 Retention.

### CURE.

### 4 CONTUSION.

Contusion or bruising, is induced by the pressure or action of the lever, forceps, &c.

Contusion, easily discovered, consists in a distraction of the solid, and a proportional congestion or extravasation of the fluids.

### CURE.

### FIRST INDICATION.

Causes ought to be avoided and obviated.

### SECOND INDICATION.

The fulfilment of this, especially when inflammation appears, requires,

- 1 Leeching,
- 2 Poulrice.

## 5 ECCHYMOSIS.

Ecchymosis or swelling, and often discoloration, affects the scalp and face, &c. during lingering birth.

## CURE.

## FIRST INDICATION.

Causes to be obviated as much as possible.

## SECOND INDICATION.

This demands,

- 1 Leeching,
- 2 Poultice,
- 3 Emollients.

## FIRST INDICATION.

## 6 HARELIP.

Harelip is a frequent deformity, which, by preventing sucking, proves very destructive.

## CURE.

This requires,

- 1 Conversion into wound of a form favourable



2 Re-union procured by combining the twisted and false sutures.

This plan may be attempted early.

## 7 CLEFT PALATE.

Cleft palate is a perforation or slit of the palate, giving an unusual communication betwixt the mouth and nose.

This affection has the same effect as harelip, to the nature of which it is much allied: Indeed, they are sometimes both present at once †.

### CURE.

When the deficiency is small, attempts may be made to obtain concretion.

When this is impracticable, on account of largeness, a temporary relief may be obtained by a plug of sponge, &c.

## 8 TONGUE-TYING.

Tongue-tying is a deformity of the bridle of the tongue, (frænum linguæ), hampering the forward motion and preventing sucking.

\* Systematic Elements of Surgery.

† Systematic Elements of Surgery.

CURE.

The frænum is divided safely by a pair of small scissars, guarded at the points by a slit silver plate \*.

9 IMPERFORATED ANUS.

The want of an anus, or orifice of the inferior extremity of the intestine (anus imperforatus), is easily discovered,

CURE.

Cautious incision or perforation is necessary.

This is kept pervious by,

- 1 Lint,
- 2 Sponge,
- 3 Bougie.

10 IMPERFORATED URETHRA.

Imperforation of the urethra, hindering the discharge of urine, occurs seldom.

\* Systematic Elements of Surgery.

## PUERPERAL PATHOLOGY. 205

### CURE.

This is obtained by,

Incision.

---

### 11 IMPERFORATED NOSE.

Imperforation of the nose, or the absence of the nostrils, is rarely met with \*.

It prevents sucking.

### CURE.

Incision may be attempted.

---

### 12 THRUSH.

The thrush is an aphthous or ulcerous state of the mouth or throat, (fauces).

This is said to extend along the whole of the alimentary canal, at least it is visible at the anus.

The white crust is of various thickness.

\* I met with an instance in which there seemed to be a total want of the cavity of the nose. The incision was therefore impracticable.



## 206 PUERPERAL PATHOLOGY.

The thrush appears a few days after birth, and seems to be connected with a diffused inflammation, (erysipelas).

When extensive it excites fever, and not seldom proves fatal.

### CAUSE.

The exciting cause seems to be the irritation of the

1 Air,

2 Food.

### CURE.

#### FIRST INDICATION.

Causes to be anxiously avoided and obviated,

#### SECOND INDICATION,

The symptoms are softened by,

1 Emollients,

2 Borax,

3 Opiates,

### 13 JAUNDICE.

Jaundice, (icterus) is commonly called the yel-

low gum, because it gives a yellowness of the surface.

**SYMPTOMS.**

- 1 Yellowness of the surface,
- 2 Sluggishness,
- 3 Costiveness,
- 4 White faeces abound,
- 5 Yellow urine.

**CAUSE.**

Whatever blocks up the gall ducts or prevents excretion of the bile, may be an exciting cause.

Is the alteration at birth of the blood's trans-  
mission through the liver, to be considered as  
concerned in giving rise to infantile jaundice?

**PROGNOSTIC.**

This disease is transient and seldom dangerous.

**CURE.**

**FIRST INDICATION.**

Obstructing causes to be carefully investigated  
and obviated by,

- 1 Food of suited quality,
- 2 Laxatives,—magnesia, &c.

## 208 PUERPERAL PATHOLOGY.

### SECOND INDICATION.

The symptoms disappear as soon as the productive cause has been removed.

### 14 RASH.

Rash, commonly called the red gum \*, is an efflorescence or eruption more or less extended over the skin.

It seems to consist in a proportioned inflammation; at least, this is connected with it.

### CAUSES.

- 1 Exposure,
- 2 Dress,
- 3 Acrid matter.

### CURE.

### FIRST INDICATION.

Exciting causes require removal.

### SECOND INDICATION.

This is effected by,

\* FOSTER'S Principles and Practice of Midwifery, p. 313.



## PUERPERAL PATHOLOGY.

- 1 Laxatives,
- 2 Tepid bath,
- 3 Soft dress,

### 15 FEVER.

Infantile fever is frequent on account of peculiar sensibility.

#### CAUSE.

Irritation on the intestines, &c.

#### CURE.

#### FIRST INDICATION.

The utmost attention is to be directed to the removal of causes.

#### SECOND INDICATION.

This requires, according to habit,

- 1 Bleeding by leeches,
- 2 Gentle purging,
- 3 Tepid bathing,
- 4 Opiates.

### 16 ROSE.

*Rose*, or erysipelas, is a superficial inflammation, often shifting its place, and becomes sometimes general over the skin.

D d

## **PUERPERAL PATHOLOGY.**

### **CURE.**

This being an inflammation it requires the management already specified \*.

---

### **17 PURGING.**

Purging, or diarrhoea, is a frequent disease of the infant, and often is a mortal affection.

### **EXCITING CAUSE.**

Improper food, producing indigestion, flatulence, acidity, &c.

### **CURE.**

#### **FIRST INDICATION.**

Attention to the exciting cause is indispensable,

#### **SECOND INDICATION.**

Here acidity is corrected by antacids,

1. Alkaline salt,
- 2 Magnesia,
- 3 Chalk,
- 4 Animal earth.

\* Dr UNDERWOOD has marked erysipilas frequently as a fatal disease. His practice in it seems a good deal problematical. See his Diseases of Children.

## **PUERPERAL PATHOLOGY.**

Irritation is diminished by,

- 1 Bland animal food,
- 2 Mucilaginous injections,
- 3 Opiates.

---

### **18 COLIC.**

Colic, or gripes, frequently torment the infant.

#### **CAUSES.**

- 1 Flatus,
- 2 Irritation,

#### **CURE.**

#### **FIRST INDICATION.**

Causes to be diligently removed.

#### **SECOND INDICATION.**

This requires,

- 1 Carminatives,
- 2 Laxative injections,
- 3 Opiates.

---

### **19 RUPTURE.**

Rupture, or hernia, is common in the male infant.



## 202 PUERPERAL PATHOLOGY.

It is of the congenial kind, and consequently the contents of the gut are admitted to the bottom of the scrotum; hence it is called wind-rupture, &c.

### CAUSES.

- 1 Crying,
- 2 Straining.

### CURE.

Palliation at least, often complete cure is obtained by,

- 1 Reduction,
- 2 Bandaging giving retention.

## 203 SYPHILIS.

The Syphilis, or effects of the venereal poison, is often communicated to the unborn child.

### CURE.

Mercury may be safely administered, as taught.

## 21 WEANING-BRASH.

The weaning-brash is violent diarrhoea, or purging, frequently producing vomiting, wasting, &c.

**CAUSES.**

- 1 Early weaning,
- 2 Improper food.

**CURE.**

**FIRST INDICATION.**

The removal of causes is highly interesting.

**SECOND INDICATION.**

This demands according to circumstances,

- 1 Restoration of the nurse's milk,
- 2 Digestible nutritious food \*,
- 3 Opiates.

**22 ATROPHIA.**

Atrophia is a wasting or shrinking of the flesh, often going on to very complete emaciation.

**CAUSES.**

- 1 Want of food, milk, &c.
- 2 Weakness of the stomach, &c.
- 3 Obstruction of the glands of the mesentery, producing a large and hard belly, (tabes mesenterica).

\* The gruelly or mealy food, with an admixture of sugar, is the most improper that could be devised.

## 214 PUERPERAL PATHOLOGY.

### CURE.

#### FIRST INDICATION.

A timely removal of causes is highly important.

#### SECOND INDICATION.

Relief may be acquired by,

- 1 Suited food attentively given.
- 2 Cordials to invigorate the bowels—wine, spirit, &c.
- 3 Slight mercurial doses, when obstruction is suspected.

---

### HYDROCEPHALUS.

Hydrocephalus is commonly named *water in the head*.

As formerly mentioned, this kind of dropsy may be,

- 1 External, or under the scalp and without the skull;
- 2 Internal, or within the brain.

External Hydracephalus is easily discovered, and disappears for the most part spontaneously. If not,

- 1 Incision,
- 2 Stimulants,

may be necessary.



The internal kind is the most alarming.

**SYMPTOMS.**

- 1 Irregular pulse, at first strong, and afterwards quick, or febrile;
- 2 Vomiting, especially in the beginning;
- 3 Dullness of sight, and at last almost a total loss of it;
- 4 Sleepiness and inattention;
- 5 Costiveness;
- 6 Large head;

**CAUSES.**

- 1 Rickety head,
- 2 Violence, stroke, fall, &c.

**CURE.**

**FIRST INDICATION.**

The removal of causes is too often impossible.

**SECOND INDICATION.**

This is attempted by,

- 1 Bleeding at the temples with leeches when the child is strong and the face and eyes red and flushed.
- 2 Purging with sweet mercury, &c.
- 3 Blistering,
- 4 Mercurial frictions largely applied\*.

\* This disease appears to me to be incurable. I have never seen one case of it in which I could say a cure had been effected—Since authors are of opposite sentiments an attempt may always be made.

**SPINA BEFIDA.**

Spina befida is a round swelling on the spine generally at the loins.

It exists before birth, and partakes of the nature of Hydrocephalus internus.

**DENTITION.**

Dentition, or teething, is fever, and frequently purging during the cutting of the teeth.

**CAUSE.**

Irritation.

**CURE.**

**FIRST INDICATION.**

This is exceedingly important and may be promoted by,

Incision of the gums.

**SECOND INDICATION**

This may require,

- 1 Bleeding,
- 2 Tepid bath,
- 3 Opiates,

**THE END.**

## EXPLANATION of the PLATES.

### PLATE I.

Fig. 1. The os innominatum.

**A Os ilium,**

A Anterior superior spinous process,

BB Spine,

c Inferior spinous process,

D Ischiatic notch,

E Articular surface,

F Linea innominata,

**B Os pubis,**

A Large ramus,

B Small ramus,

E Spine,

c Crest,

**C Os ischii,**

A Tuberosity,

B Spine,

c Ramus,

o Thyroid hole.

Fig. 2. The os sacrum.

A Articular surface above the promontory,



- BB Part of the brim of the pelvis,  
CCCC The original pieces or false vertebræ,  
DDDD Junctions of the false vertebræ,  
EEE Holes,  
F Articular surface towards the os innominatum,  
G Articular surface towards the os coccygis.

Fig. 3. The os coccygis.

Fig. 4. The bones of the pelvis in their situation.

- AA Posterior symphysis,  
B Anterior symphysis,  
ccc Brim of the pelvis,  
DD Acetabula, or cavities for the heads of the thigh bones,  
E Arch of the pubis.

## P L A T E II.

Fig. 1. A view of the brim of the pelvis.

- AA Conjugate or short  
BB Transverse or long  
cc Oblique
- } diameter.

Fig. 2. A view of the bottom of the pelvis.

- AA Conjugate  
BB Transverse  
cc Oblique
- } diameter.

## P L A T E III.

Fig. 1. A view of the brim of the distorted pelvis, by BAUDELOCQUE.

- AA Short diameter much diminished,
- BB Transverse diameter lengthened,
- DD Diagonals proportionally affected

Fig. 2. A view of the brim of the distorted pelvis, by BAUDELOCQUE.

- AA Short diameter increased,
- BB Long diameter shortened,
- cc Diagonals proportionally affected.

#### P L A T E IV.

Fig. 1. The Uterine system, by HALLER,

- AA Ovaria, the left one enlarged,
- BB The Fallopian tubes distended,
- cc Fringed extremities of the tubes,
- DD Body of the uterus cut open,
- EE Uterine cavity,
- F Os internum,
- GG Ligamenta lata,
- HH Vagina cut open on its posterior side,
- I Urethra,
- K Clitoris,
- LL Nymphæ,
- MM Labia.

Fig. 2. A view of the os internum and part of the vagina, by HALLER,

- A The Rima,
- BB Vagina.

Fig. 3. A view of the os externum, from HALLER,

- AA Labia,
- B Clitoris,

( 2 )

cc Nymphae,  
D Hymen of a femilunar form.

Fig. 4. A view of the os externum, by HAL-  
LER.

AA Labia,  
B Clitoris,  
c Urethra,  
ddd Hymen of a circular form.

Fig. 5. A view of the os externum,

AA Labia,  
B Clitoris.  
c Urethra,  
D Hymen large and femilunar,

## PLATE V.

A vertical section of the uterus, containing the child at the commencement of parturition, as large as the life, by ALBINUS.

AA The substance of the uterus, containing the numerous orifices of the cut vessels of various sizes.

A The umbilical chord about the child's neck, the head presented and the limbs folded and crossing one another.

B The chord appearing below the arms and dissected through its remainder,

cccc Umbilical arteries,

ddd Umbilical vein lying between the arteries,

eee Placenta, made up of the umbilical vessels, and adhering to the fundus uteri.



ccc The amnios and its continuity with the cuticle of the child's body.

fff The Chorion in contact with the uterine surface, and interior to the placenta, and its continuity with the true skin of the child's body.

N. B. *These circumstances are not represented by ALBINUS.*

The space between the child's body and amnios is occupied by the liquor amnii or waters.

pp Os internum somewhat dilated,

cc Part of the vagina.

## PLATE VI.

A vertical section of the uterus at the commencement of parturition, with the placenta adhering, as large as life, by ALBINUS.

aaa Substance of the uterus,

bbb Uterine surface,

cc Os internum, somewhat dilated,

dd Portion of the vagina,

eeee Placenta adhering to the side or cavity of the uterus,

ffff Umbilical arteries, beautifully ramifying on the surface of the placenta which regards the child.

gggg Umbilical veins, likewise ramified,

h Cut extremity of the umbilical chord.

## PLATE VII.

FIG. 1. A vertical and lateral section of the uterus, vagina, and pelvis, exhibiting the child, with its head in the cavity of the pelvis, the face

lodged in the cavity of the os sacrum, the vertex presented, and the forceps applied---by BAUDELOCQUE.

FIG. 2. The full-sized foetal skull in a side view---by SUE.

## PLATE VIII.

FIG. 1. A vertical and lateral section of the uterus, vagina, and pelvis, exhibiting parturition in the same progress as in the former plate, the child's face turned somewhat to the side of the pelvis, and the forceps applied-----by BAUDELOCQUE.

FIG. 2. A vertical and lateral section of the uterus and pelvis, exhibiting the child's head in the brim, and the forceps applied-----by BAUDELOCQUE.

## PLATE IX.

FIG. 1. A lateral and vertical section of the uterus and pelvis, exhibiting the child's head in the brim, the face turned to the mother's side, and the forceps applied---by BAUDELOCQUE.

N. B. *The form of the locking part of the forceps and the handles, is original.*

Fig. 2. A vertical and front section of the uterus, representing a face-presentation, and the

lever applied to the occiput, and the operator's fingers to the face--by BAUDELOCQUE.

N. B. *The form of the lever is somewhat altered. It is supposed to be the living one.*

## P L A T E X.

Fig. 1. A view of the *forceps locked*, as in fig. 1. pl. ix. applied to extract the head, the face turned to the side of the pelvis.

In the handle of the forceps is a screwed nail with a broad head, which prevents the instrument from opening, during the operation, beyond the requisite degree.

A contrivance of this kind serves as a *cephalometer*, even when the head is entirely above the brim.

Fig. 2. A view of the forceps used to extract the head, when the face is turned to the concavity of the os sacrum.

## P L A T E XI.

Fig. 1. A view of the *living lever* without its covering, in order to explain its mechanism.

AA Jointed pieces which admit of inward flexion.

BB Two strips of steel riveted to the piece at the point, stretching along the joints lodged in a groove,



to the handle, and are there connected with the broad-headed screwed nail, *c*; which, by being turned, gives the requisite flexion and extension.

DD A grooved piece of steel or silver to be occasionally tied upon the point of the lever, which converts it into a *reductor* for replacing the umbilical chord.

Fig. 2. A side view of the *living lever properly covered*, a ribbon fixed near to its handle, which may be employed as a fulcrum.

The dotted lines shew this lever when it is nearly in its extended state.

Fig. 3. A view of the *universal pelvimeter*, with its scale of inches and eights, and slider.

The dotted lines shew the manner in which the scale is moveable to render the pelvimeter conveniently portable.

Fig. 4. A view of the female catheter, with a scale of inches and eights, by which it becomes a pelvimeter as to the short diameter.

Fig. 5. A view of the lever, its handle uppermost, and a shallow cup-like piece of wood or metal fixed upon it, to be properly stuffed, by which it is occasionally converted into an *impellens*.

Fig. 6. A view of the *flexible crotchet*.

Fig. 7. A view of the *flexible blunt-hook*,

Fig. 8. A view of Dr DENMAN's perforator.

P L A T E XII.

Fig. 1. A view of the *air-pissary*.

AA The inflated small bag or bladder, provided with a valve, to prevent the escape of the air.

BB The flexible tube, for procuring the inflation to the requisite degree.

Fig. 2. A view of the *flexible saw*; one of the handles, by means of a hook, is removeable, to favour its being applied between or behind bones.

A cutting edge, instead of teeth, gives a *flexible knife*.

Fig. 3. A view of an apparatus for injecting air, &c. into the lungs, stomach, and rectum, and for extracting the same.

AA An *elastic* bag provided with a valve B, which occasionally, by a lateral opening, admits pure air. To its extremity is accommodated a flexible silver tube CC, to be introduced to a proper degree into the glottis, &c.

Fig. 4. A view of the *Embryotomy knife*, with its blade projected. This, when the finger is retired, is retracted entirely within the silver case, by means of a spiral spring, as represented in

Fig. 5. Which is a longitudinal section of the exterior case.

Fig. 6. A view of the *finger-scalpel*.

F I N I S.

Fig. 3. A view of Dr. DAWMAN'S perforator.

# PLATE XII.

Fig. 1. A view of the air-silinder. The internal small bag or bladder, provided with a valve, to prevent the escape of the air. The flexible tube, for protecting the inflation to the requisite degree.

Fig. 2. A view of the flexible tube, one of the handles, by means of a hook, is removable, to favour its being applied between or behind bones. A cutting edge, instead of teeth, gives a smooth

Fig. 3. A view of the instrument, for injecting air into the rectum, and for extracting it. A valve, which admits pure air. To its extremity, is attached a flexible tube, to be introduced to a proper depth into the rectum, &c.

Fig. 4. A view of the instrument, with its handle provided. This, when the finger is retained, is retained, firmly within the rectum, by means of a spiral spring, as represented in

Fig. 5. Which is a longitudinal section of the exterior case.

Fig. 6. A view of the instrument, &c.

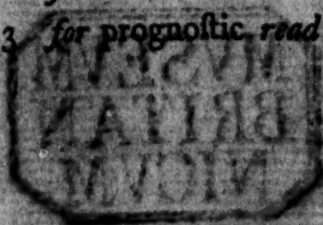
F. L. N. I. S.



## E R R A T .

The reader is intreated to excuse and correct any errors of the press, of which the following are the chief.

P.	L.
28	16 <i>for circular, read lobular.</i>
175	23 <i>for prognostic read diagnostic.</i>

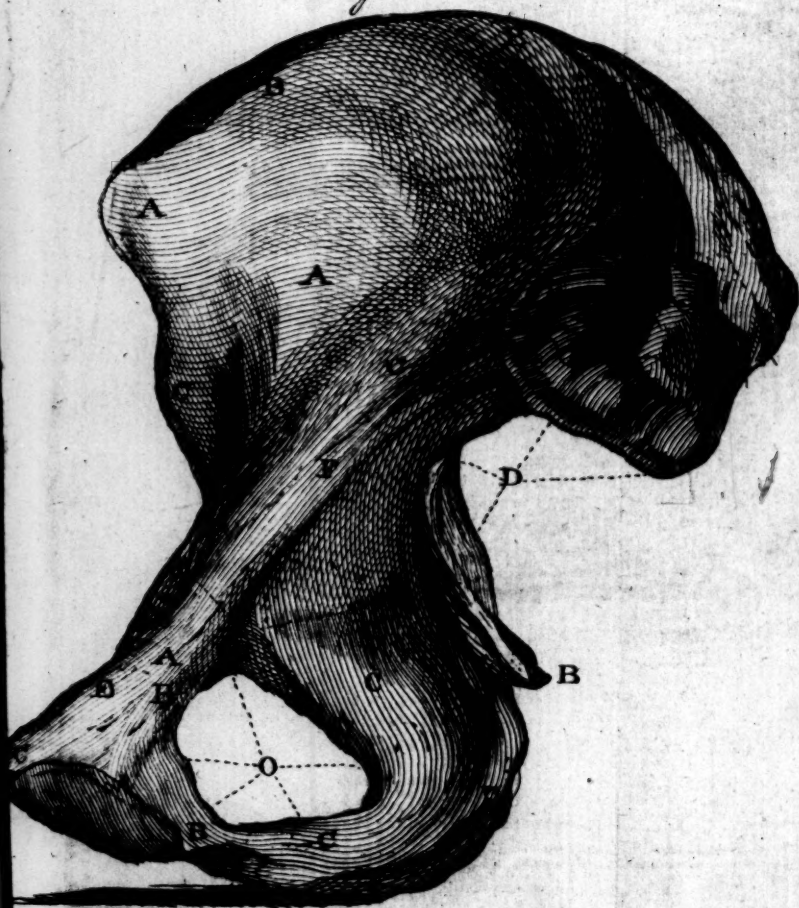


E R A T

The reader is interested to examine and correct  
any errors of the facts, of which the following  
are the chief.

P.	I.
28	16 for circular, read lobular.
175	23 for prognostic read diagnostic.

*Fig 1*

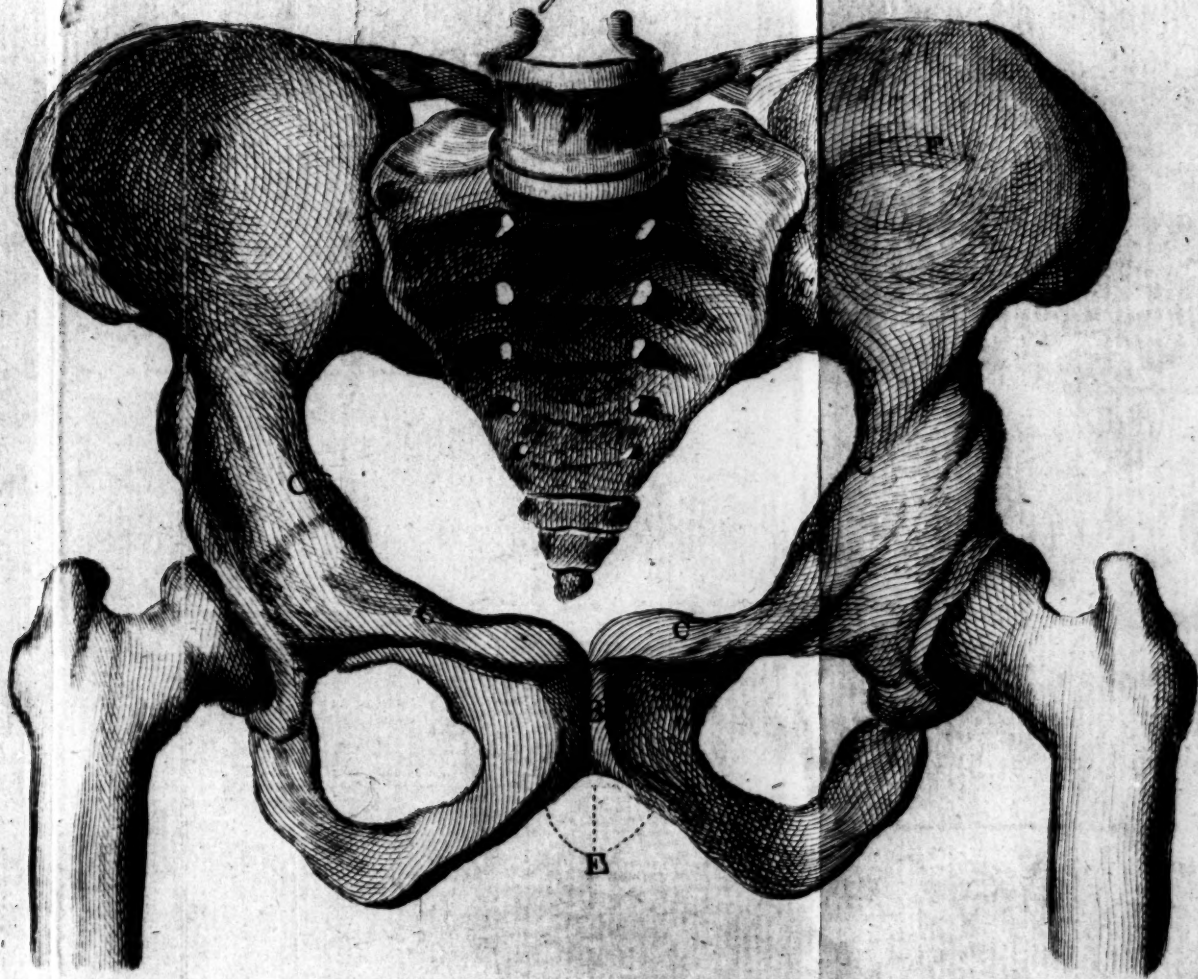


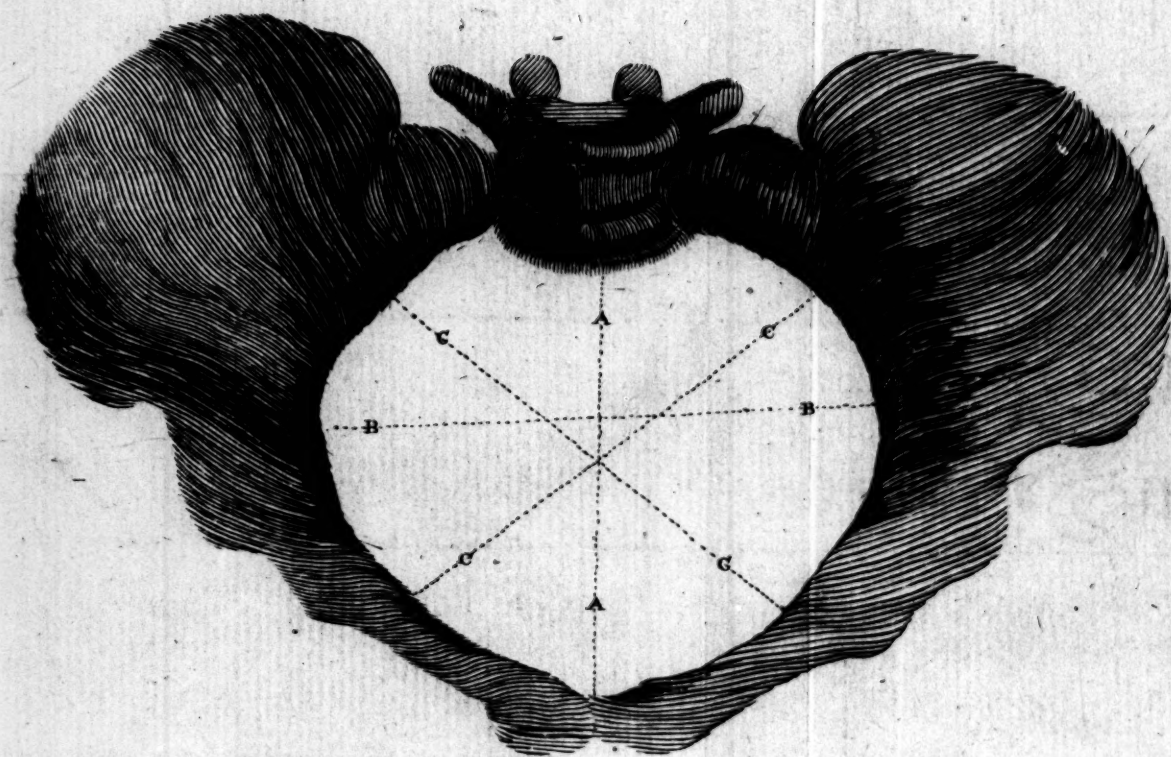
*Fig 2*



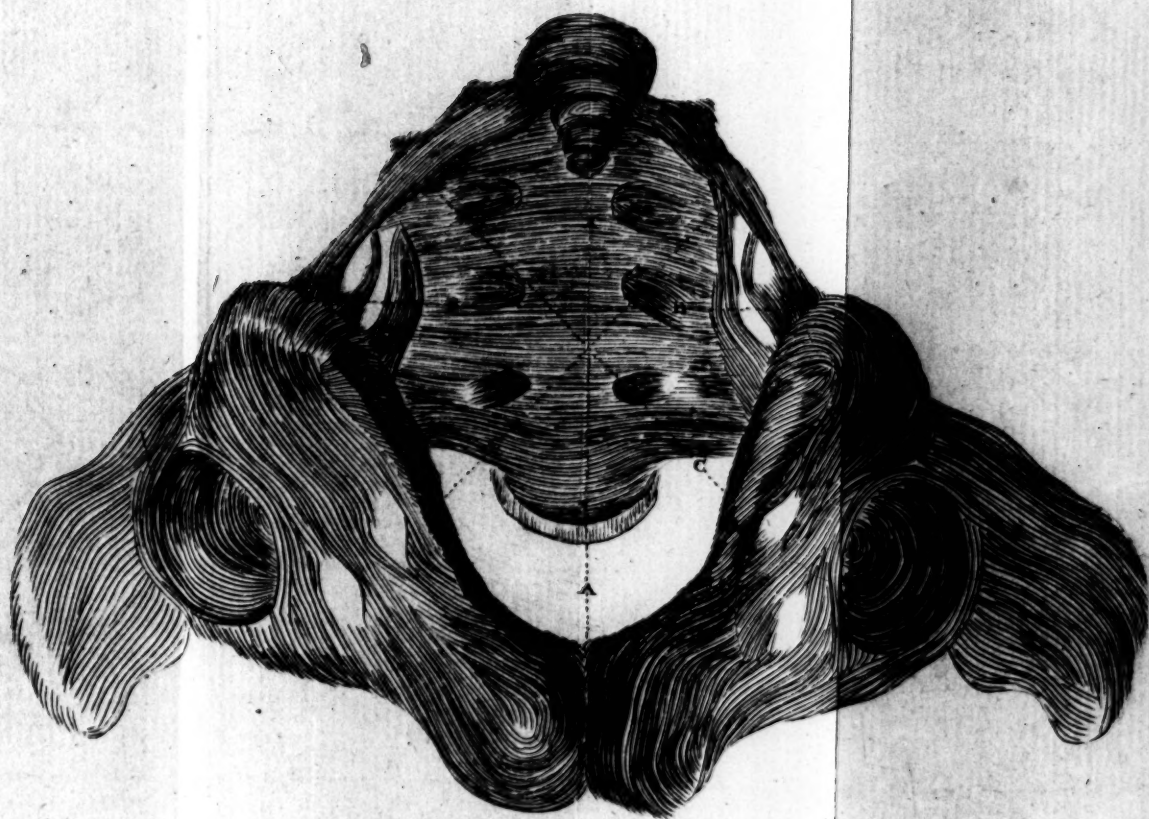


*Fig 4*

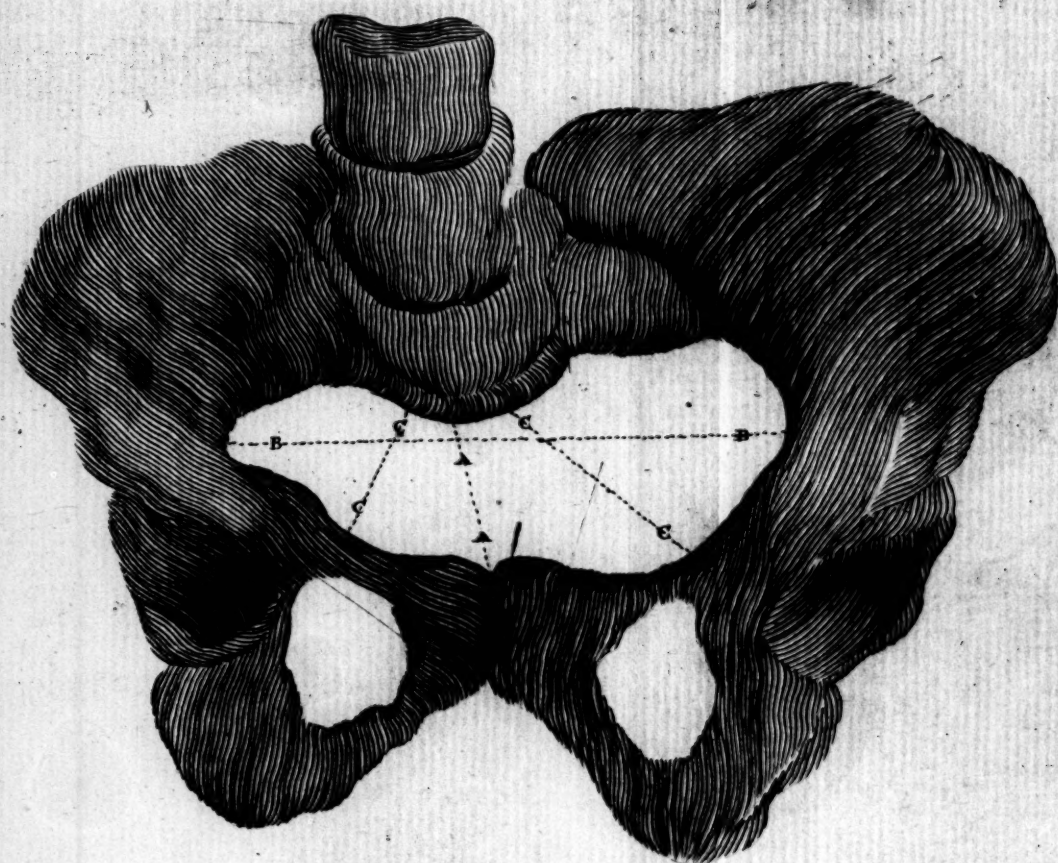


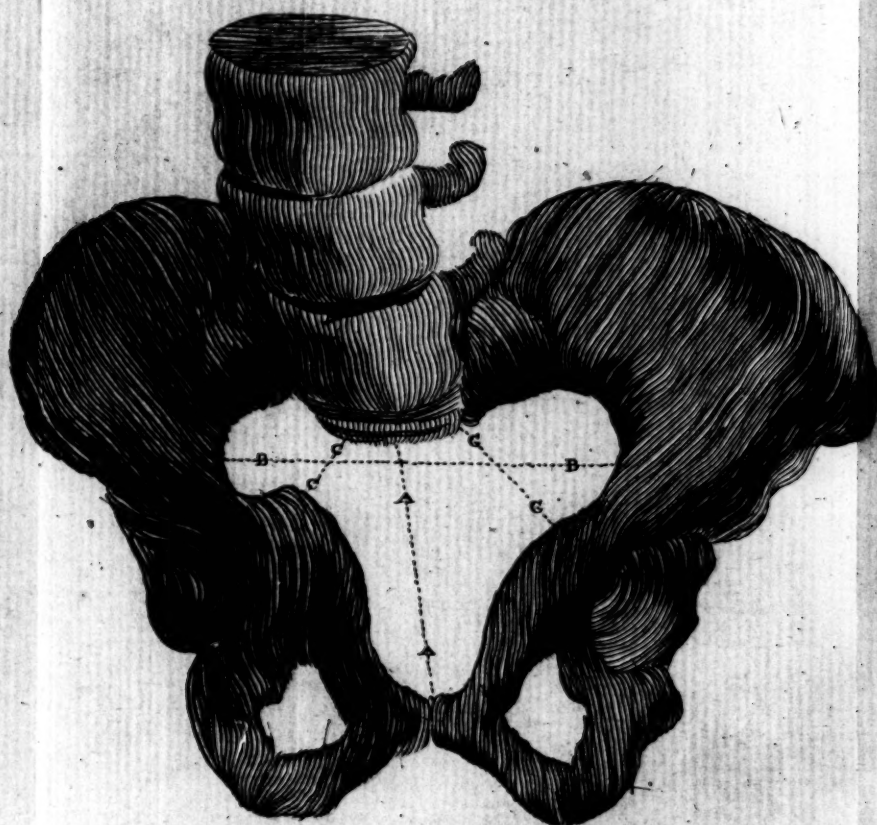








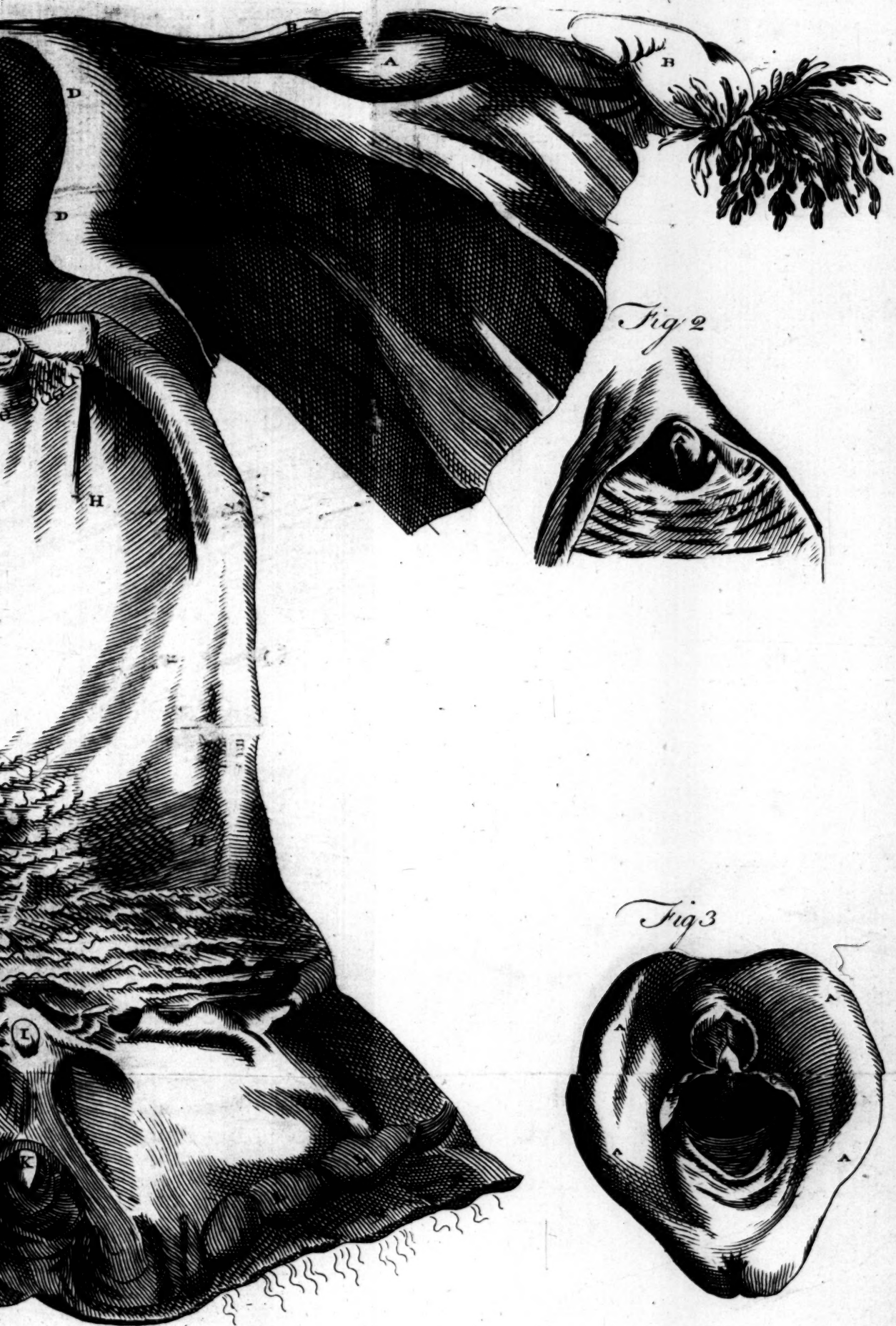












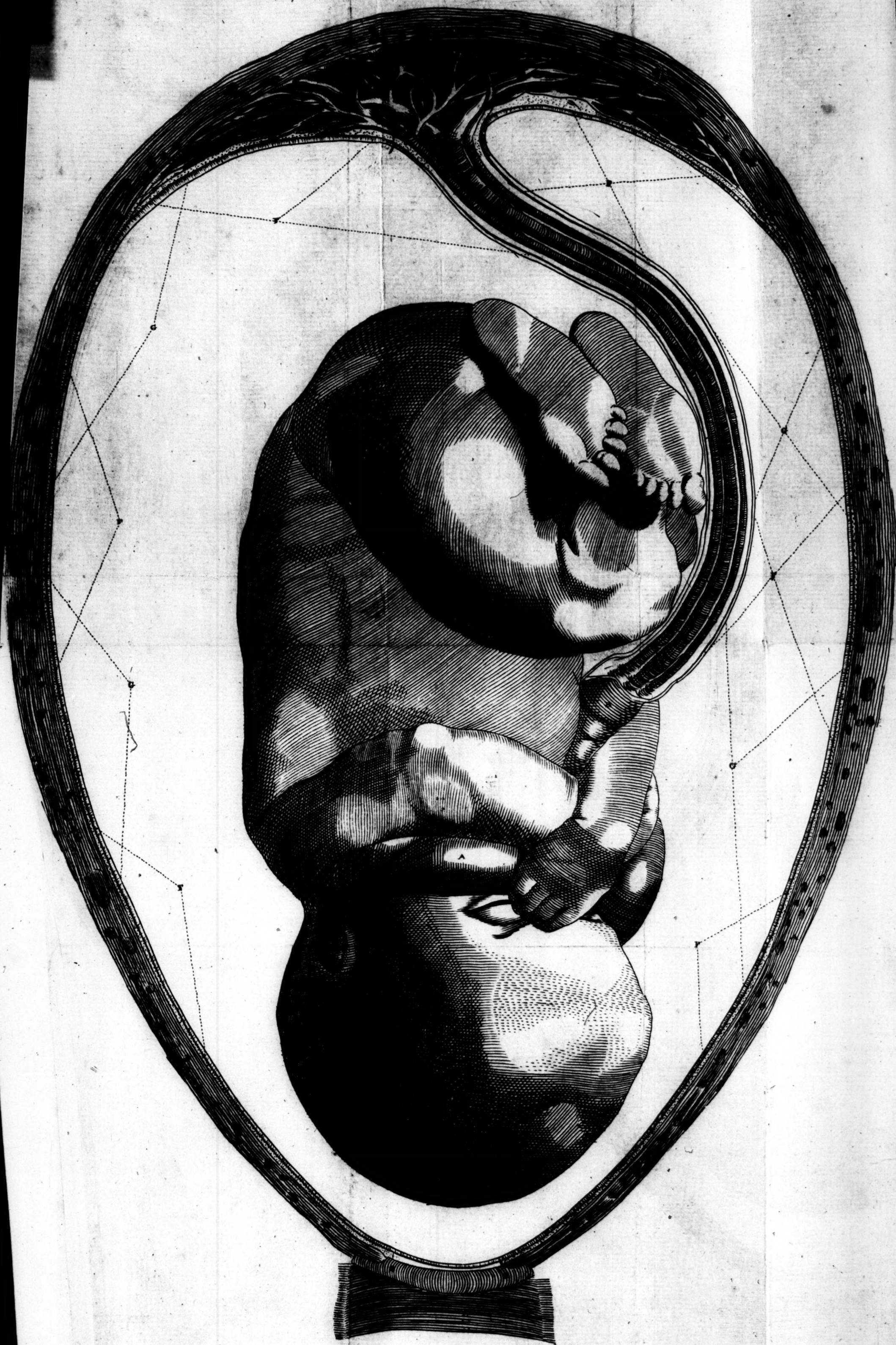
*Fig 2*



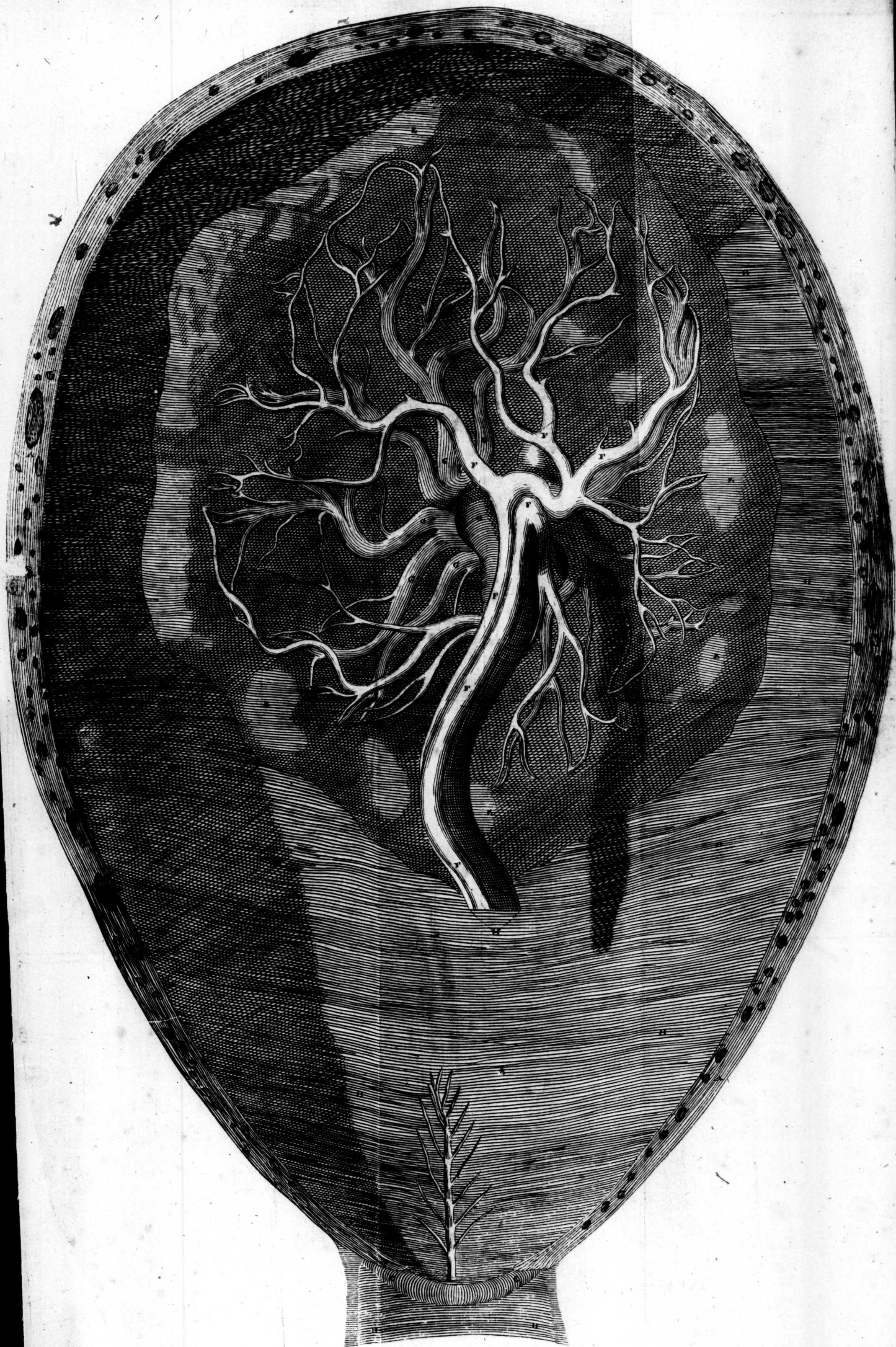
*Fig 3*



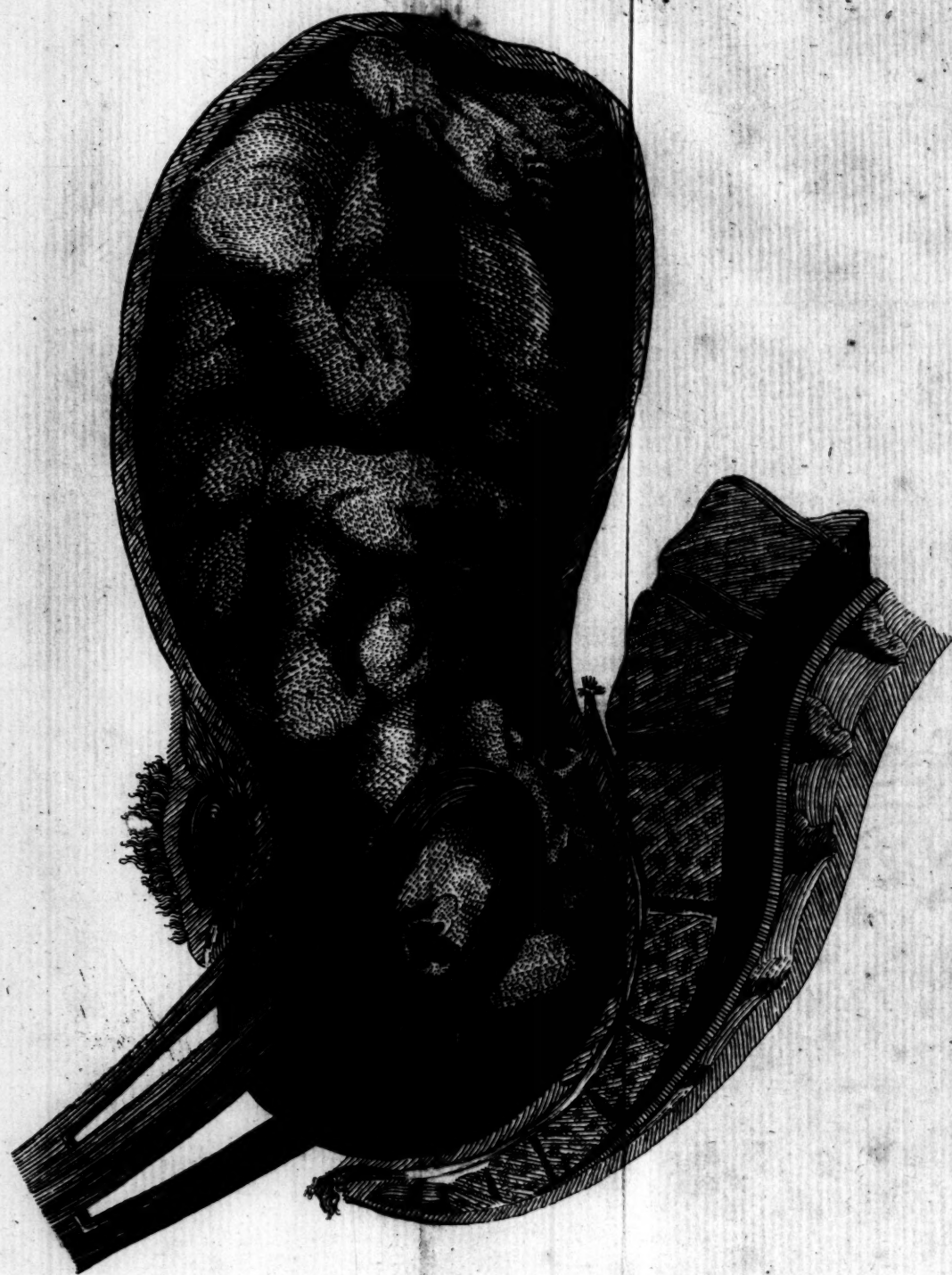




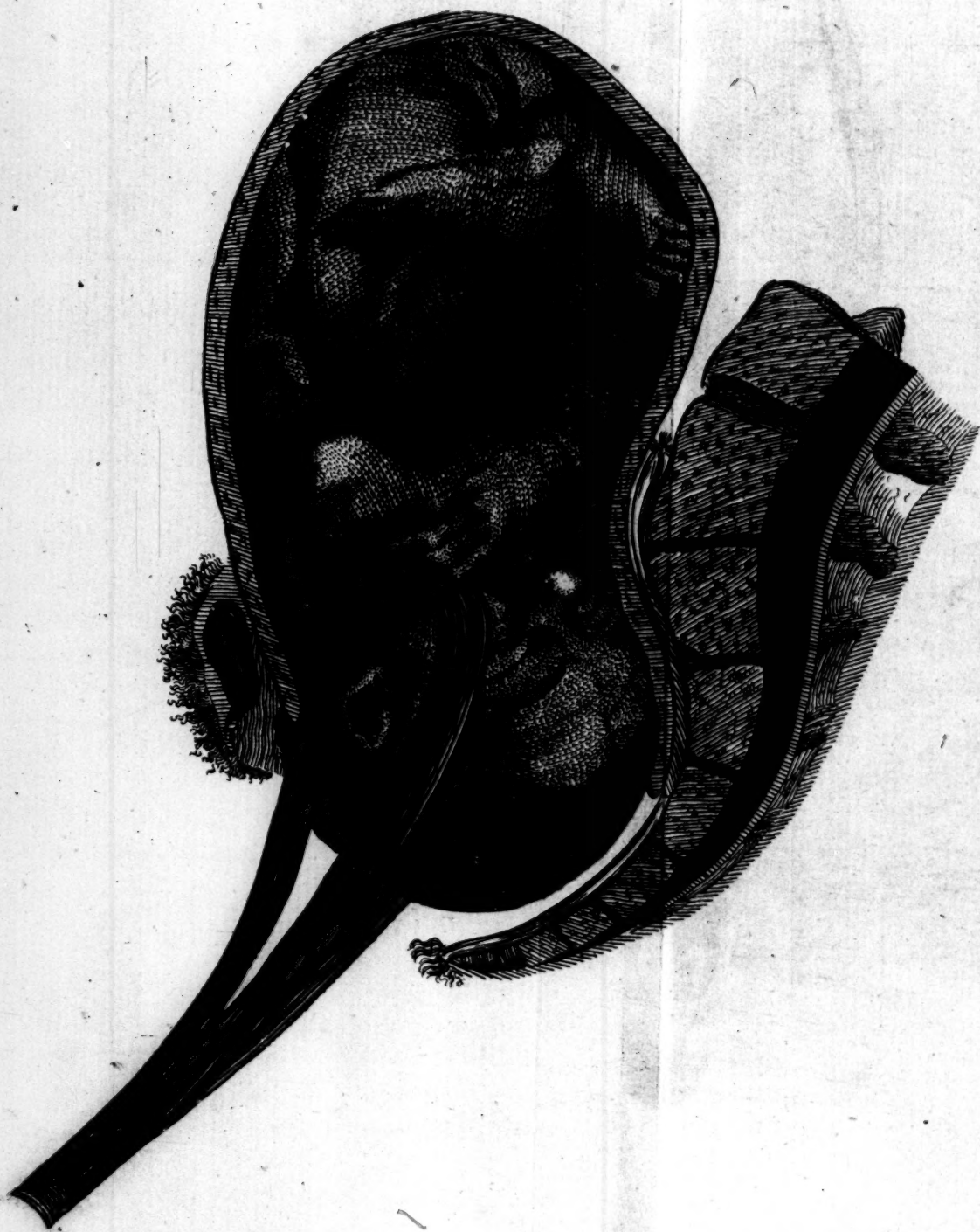




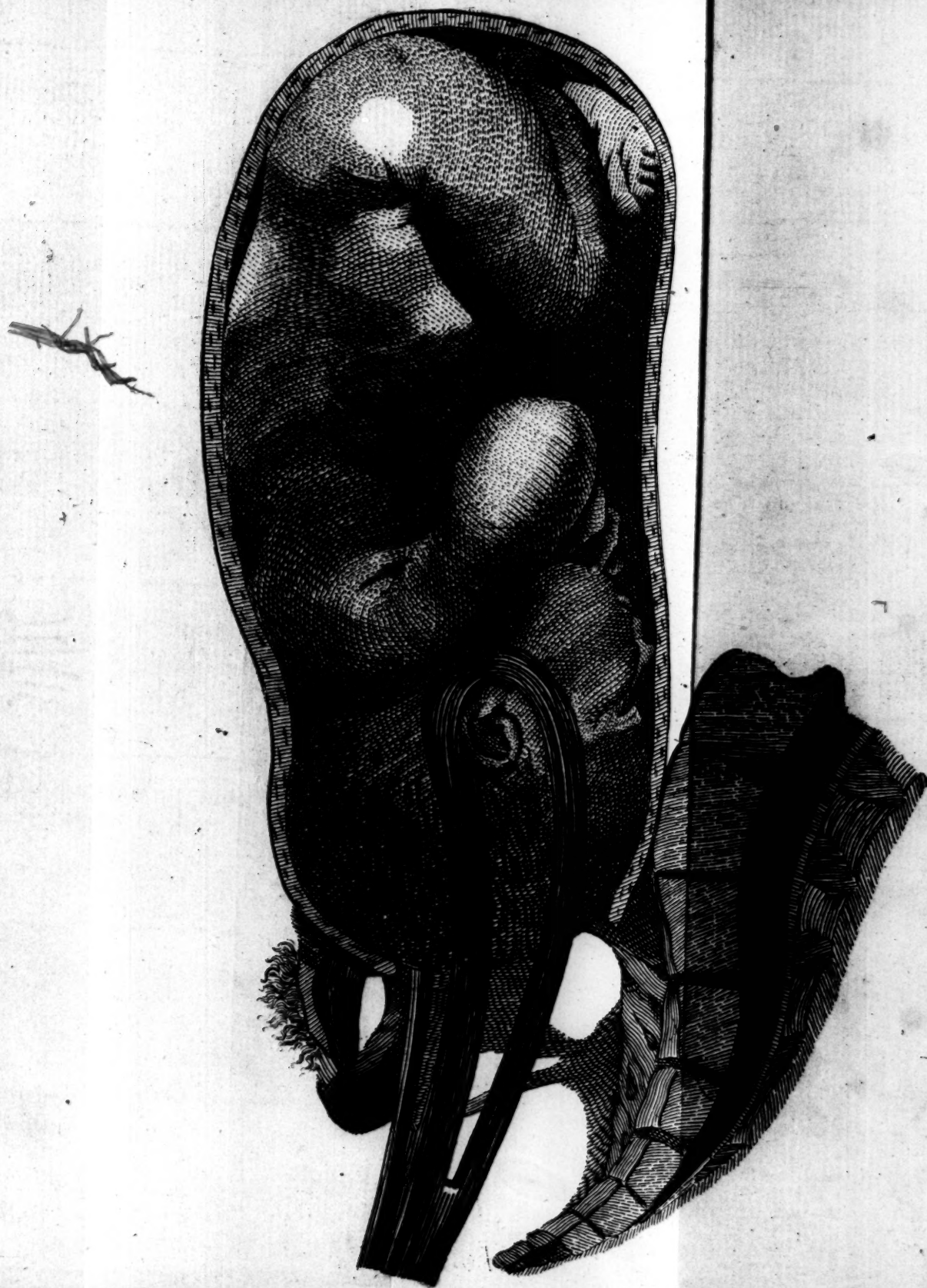














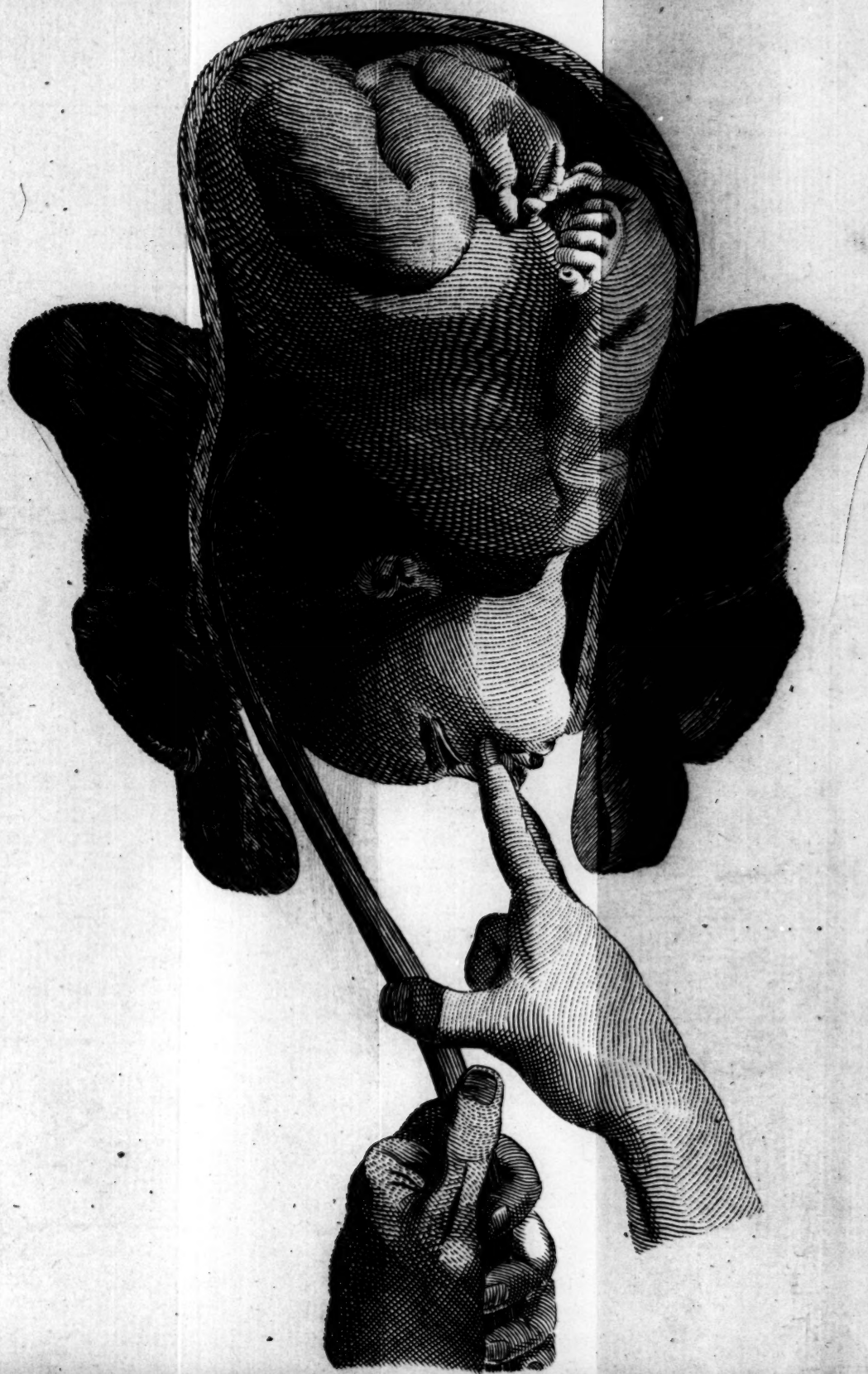










Fig 1

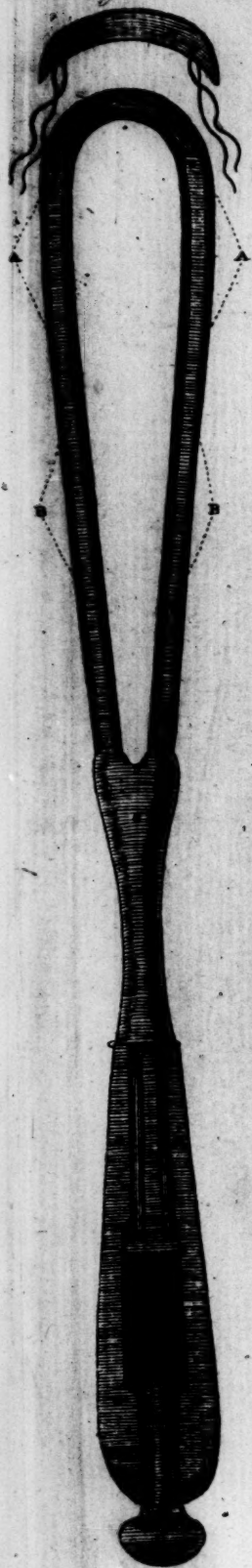


Fig 2



Fig 3

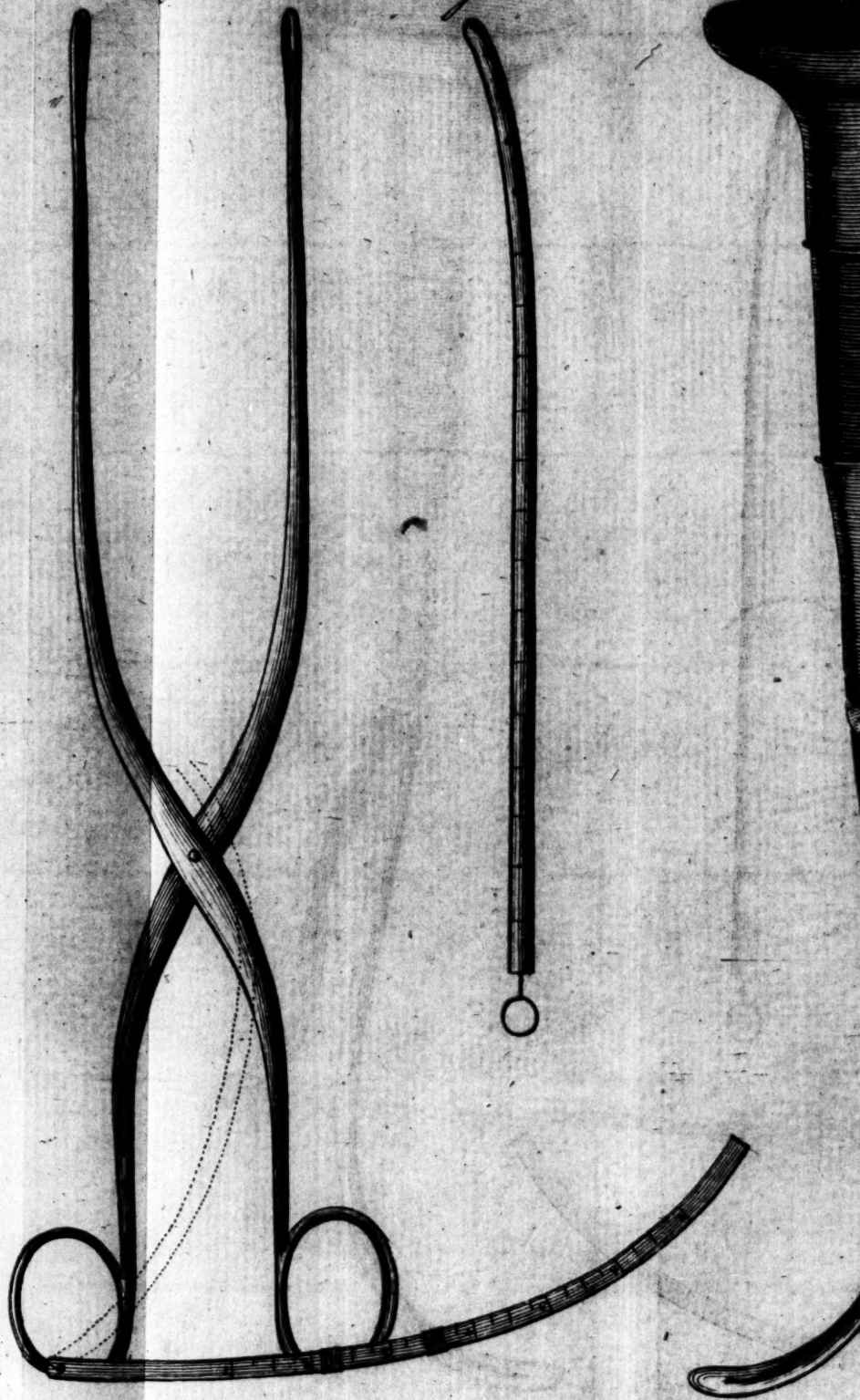
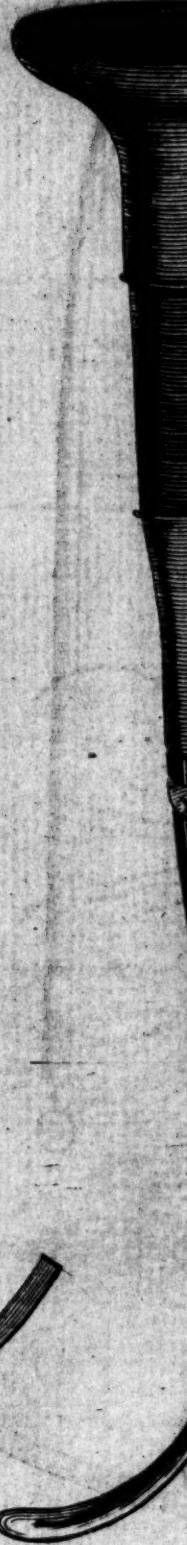


Fig 4



Fig 5





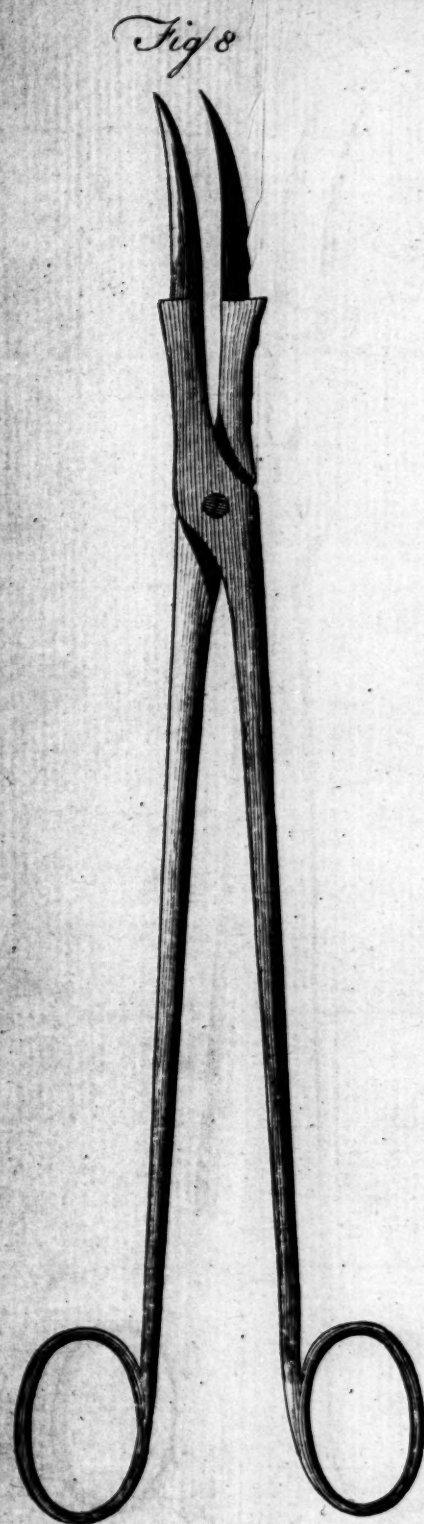
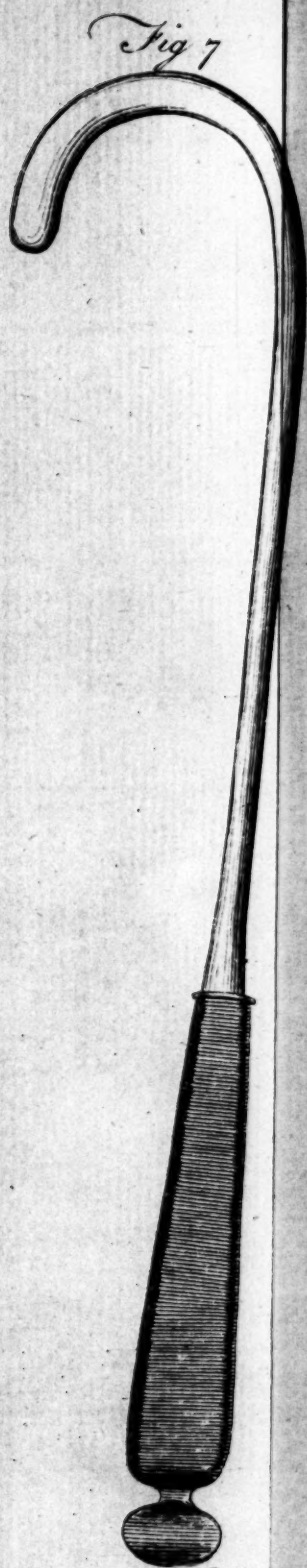
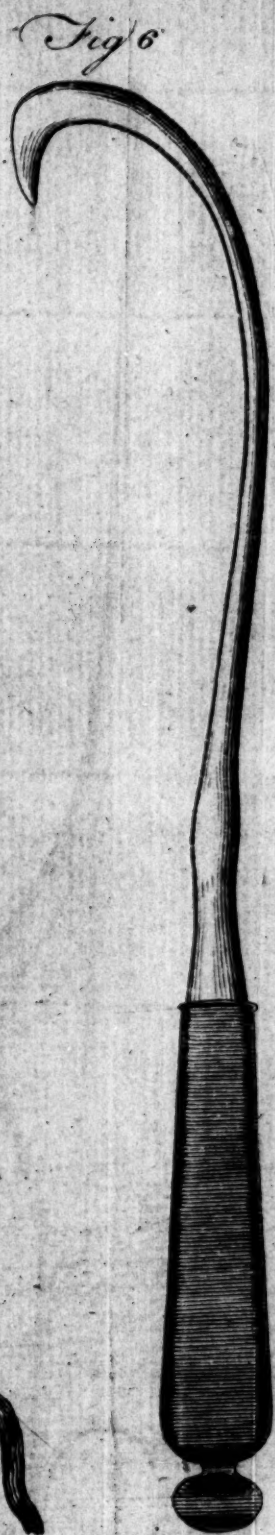
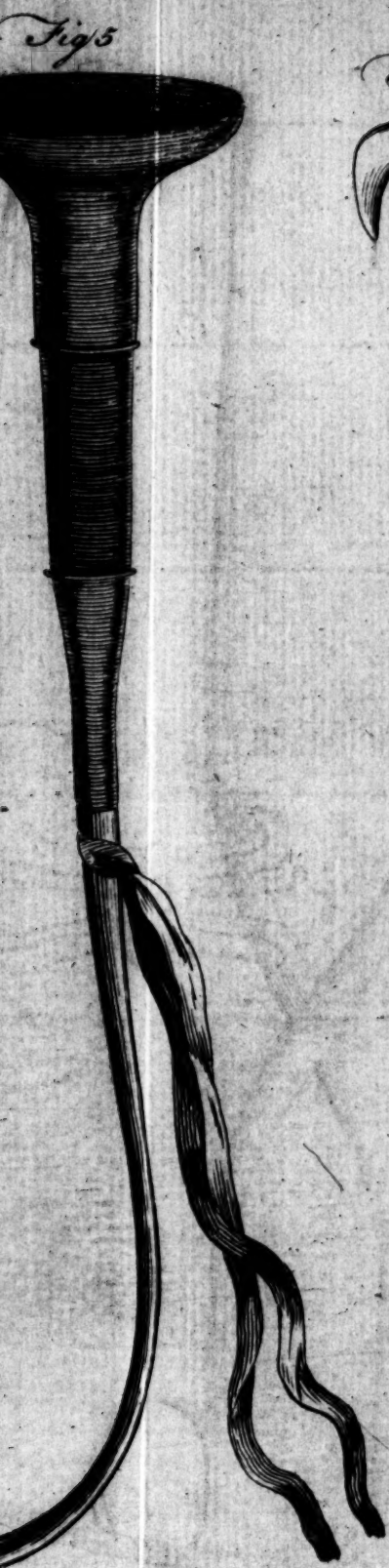


Fig 3

Fig 4

Fig 5

Fig 6

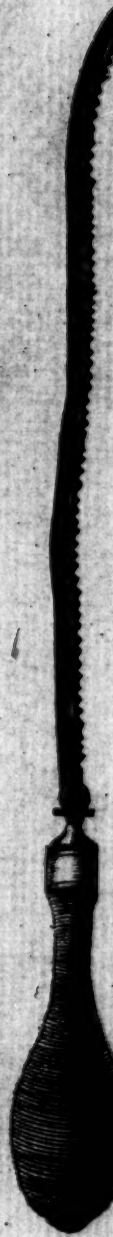
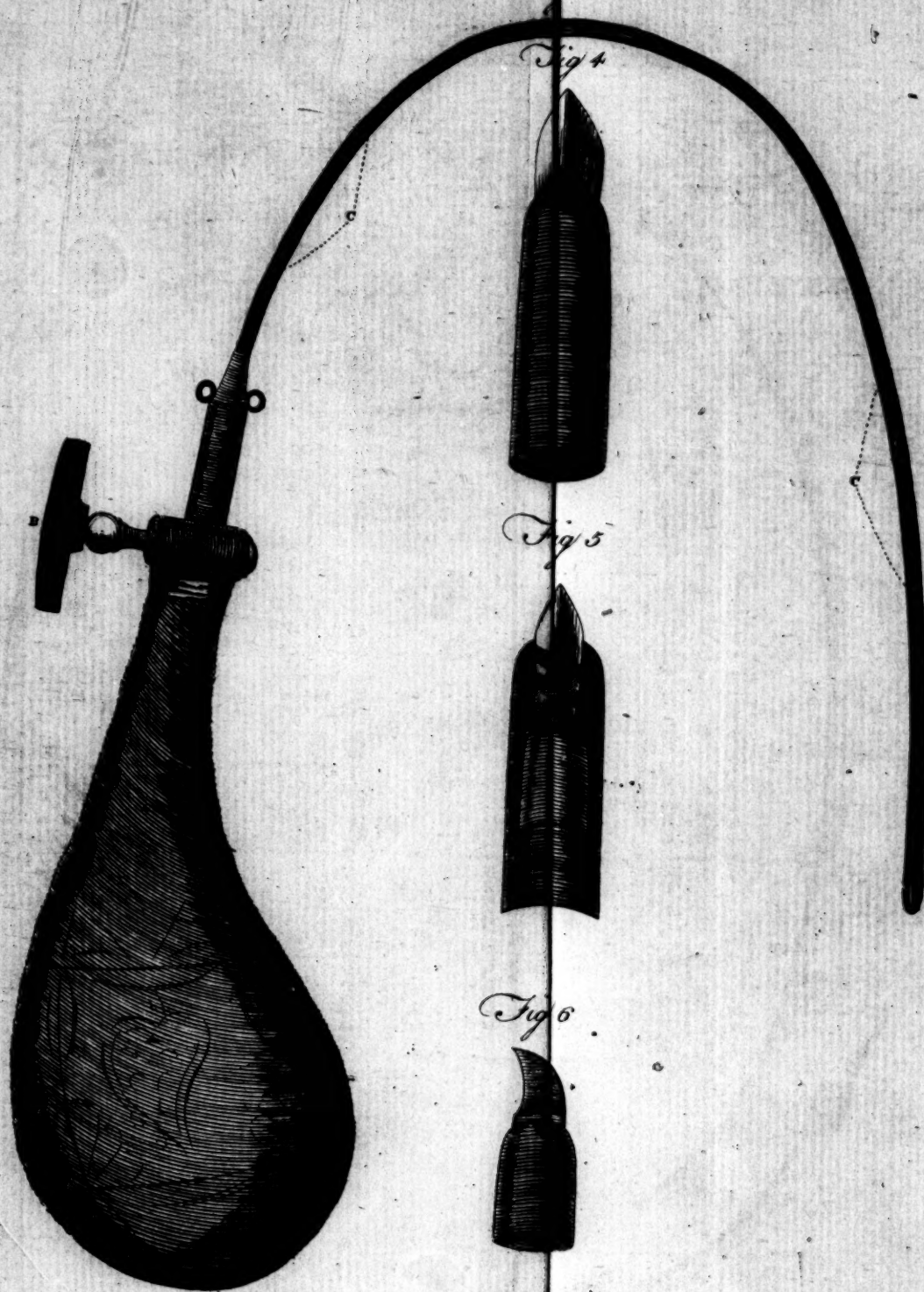




Fig 2

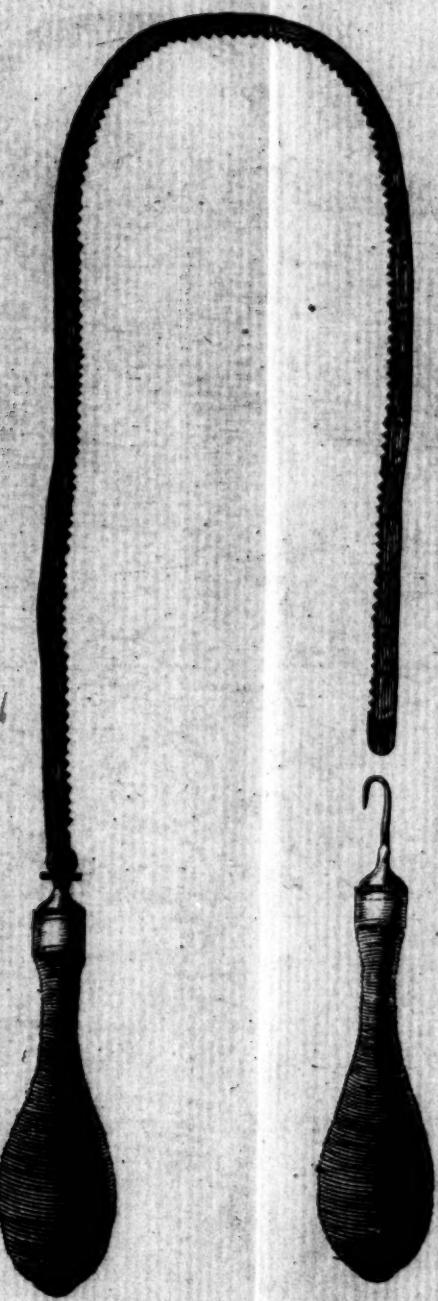


Fig 1

